DOCUMENT RESUME

ED 186 321 SO 012 558

AUTHOR Arnold, Fred; Fawcett, James T.
TITLE The Value of Children: A Cross-National Study, Volume Three. Hawaii.
INSTITUTION Hawaii Univ., Honolulu. East-West Center.
PUB DATE 75
NOTE 160p.; For related documents, see SO 012 082 and SO 012 556-561. Best copy available.
AVAILABLE FROM University Press of Hawaii, 2840 Kolowalu Street, Honolulu, HI 96822 ($3.00)

EDRS PRICE MF01/PC07 Plus Postage.
DESCRIPTORS Abortions; *Children; Comparative Analysis; Contraception; *Family Planning; *Parent Attitudes; Participant Characteristics; Policy Formation; Population Trends; Public Policy; Research Methodology; Social Science Research; *Socioeconomic Influences; *Values
IDENTIFIERS *Hawaii

ABSTRACT

The document, one in a series of seven reports from the Value of Children Project, discusses results of the survey in Hawaii. Specifically, the study investigated the social, psychological, and economic costs and benefits associated with having children. The volume is presented in seven chapters. Chapter I describes the background of the study and summarizes findings. Interviews were conducted with 620 male and female respondents equally representative of Caucasian, Japanese, and Filipino groups. The emotional benefit of watching children grow and guiding their development was a predominant value. The major disadvantages included emotional and economic costs and restrictions. Chapter II discusses the sample and methodology of the research. Chapter III details positive and negative values of children including reasons for wanting sons and daughters, general attitudes toward children, and reasons for wanting or not wanting another child. Chapter IV focuses on economic costs and benefits and Chapter V concerns family size and family planning. Chapter VI discusses the value of children within the social context. The final chapter presents population policy recommendations and implications for future research. Recommendations include creating alternatives for some of the emotional satisfactions children provide, augmenting benefits that provide economic security, and eliminating government policies which ease the financial burden of children. (KC)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED186321

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Sandra E. Ward

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

volume three

BEST COPY AVAILABLE

the value of children

a cross-national study

hawaii

SP 012 558

fred arnold & james t. fawcett
with the assistance of
sonia c. albores and peter s. norris

east-west population institute · east-west center · honolulu hawaii

Library of Congress Cataloging in Publication Data

Main entry under title:

The Value of children.

Includes bibliographies.
CONTENTS:
v. 3. Arnold, F. and Fawcett, J. T. Hawaii.
1. Children. 2. Family. 3. Child study.
I. East-West Population Institute.
HQ751.V34 301.42'7 75-8934
ISBN 0-8248-0382-5 (v. 3)

Published in the United States by the East-West Population Institute,
East-West Center, Honolulu, Hawaii.
All rights reserved.
Distributed by the University Press of Hawaii, Honolulu, Hawaii 96814.

contents

PREFACE *vii*

CHAPTER 1 Background of the study and summary of findings *1*
- The conceptual model *3*
- Summary of findings *5*

CHAPTER 2 Sample and methodology *17*
- Sample selection *17*
- Response rates *21*
- Field personnel and fieldwork *24*
- The questionnaire *25*
- Data processing *26*
- Some demographic characteristics of respondents *27*
- Profiles of sample subgroups *31*

CHAPTER 3 Positive and negative values of children *34*
- Advantages of having children *34*
- Disadvantages of having children *46*
- Perceived reasons why people in general want children *52*
- Reasons for wanting daughters and sons *54*
- Attitudes toward children *59*

Situation-specific reasons for wanting children *72*
Reasons for wanting and not wanting another child *76*

CHAPTER 4 Economic benefits and costs of children *81*
Economic benefits of children *82*
Economic costs of children *87*

CHAPTER 5 Family size and family planning *92*
Family size *92*
Childspacing *95*
Attitudes toward contraception and abortion *98*
Knowledge and practice of contraception and abortion *102*
Religious differentials in family size and birth control *105*
Correlates of family size and family planning *106*

CHAPTER 6 The social context, the value of children, and fertility *110*
Antecedent and consequent correlates of the value of children *110*
Relation of economic value of children to background characteristics and fertility *116*
Determinants of family size and family planning attitudes and behavior *119*

CHAPTER 7 Policy recommendations and implications for future research *126*
Policy recommendations *128*
Implications for future research *132*

APPENDIX A Screening questionnaire used in Value of Children Study: Hawaii *137*

APPENDIX B Country-specific questions in Hawaii Value of Children questionnaire *139*

APPENDIX C Attitude items included in nine subscales, Value of Children Study *147*

REFERENCES *149*

TABLES, FIGURES, AND EXHIBIT

Tables

2.1 Results of household screening in urban census tracts *20*

2.2 Response rates among eligible respondents, by socioeconomic and ethnic group *22*

2.3 Selected characteristics of respondents, by socioeconomic and ethnic group and by sex *28*

3.1 General advantages of having children *38*

3.2 Specific advantages of having children *42*

3.3 Most important advantages of having children *44*

3.4 General disadvantages of having children *47*

3.5 Specific disadvantages of having children *49*

3.6 Most important disadvantages of having children *51*

3.7 Perceived reasons why people in general want children *53*

3.8 Reasons for wanting girls *56*

3.9 Reasons for wanting boys *57*

3.10 Factor structure of 45 attitude items after varimax rotation *62*

3.11 Factor structure of attitude items with loadings greater than .50 on Factor I after varimax rotation *66*

3.12 Mean values of nine subscales derived from 45 attitude items *70*

3.13 Reasons for not wanting fewer than desired number of children *73*

3.14 Reasons for not wanting more than desired number of children *73*

3.15 Reasons for not wanting another child *74*

3.16 Most important reasons for wanting another child *77*

3.17 Most important reasons for not wanting another child *79*

4.1 Perceived economic benefits and costs of children *83*

4.2 Perceived changes in the economic utility of children over time *85*

4.3 Perceived economic burden of raising different numbers of children *88*

4.4 Estimated economic costs of children *90*

5.1 Selected measures of family size and family-size preference *93*

5.2 Comparison of selected family-size measures *95*

5.3 Birth intervals, by socioeconomic and ethnic group *96*

5.4 Ideal and actual spacing of first child *97*

5.5 Attitudes toward birth control and abortion *100*

Tables, *continued*

5.6 Knowledge and use of contraceptive methods *103*

5.7 Contraceptive use and timing, by socioeconomic and ethnic group *104*

5.8 Current contraceptive use, by parity and number of additional children wanted *106*

5.9 Selected measures of family-size preference and birth control, by socioeconomic status and religion *107*

5.10 Correlations among fertility and birth control variables, background variables, and socio-psychological variables *108*

6.1 Correlations of value-of-children dimensions with selected background and fertility measures *111*

6.2 Correlations of economic indices of the value of children with background, fertility, and birth control variables *117*

6.3 Prediction of selected family-size and birth control measures, as shown by proportion of variance explained (R^2) *120*

6.4 Prediction of selected family-size and birth control measures, as shown by standardized regression coefficients (betas) *122*

Figures

1.1 Conceptual model for the Value of Children Study *4*

2.1 Socioeconomic groups surveyed, by sample district: Hawaii *19*

3.1 Dimensions of the value of children across socioeconomic and ethnic groups *71*

Exhibit 3.A Major code categories and specific code categories used in the content analysis of responses: advantages and disadvantages of having children *35*

preface

This volume reports the basic findings from the Value of Children Study in Hawaii. Contributions by individuals and organizations involved in the cross-national Value of Children project conducted in Japan, the Republic of Korea, the Republic of China (Taiwan), the Philippines, Thailand, and the United States (Hawaii) are acknowledged in the preface to the first volume of this series (Arnold et al., 1975). In this report we wish to give credit to those who have participated in the Hawaii study.

It is not possible to thank individually the more than 100 persons who have worked on this project at various stages. We are particularly indebted to our interviewers for their hard work under difficult conditions and to the respondents for their cooperation and interest in the study.

Continuous support and encouragement for the project were provided in the early stages of the research by Paul Demeny, former director of the East-West Population Institute, and subsequently by Keith Adamson, former acting director, and Lee-Jay Cho, current director. James Palmore served as a consultant on various aspects of the study design; both he and Dennis Chao provided useful comments and suggestions during the analysis stage.

It should be emphasized that this has been a collaborative study since its inception and that many of the decisions with respect to study design and analysis have been made jointly. Therefore a great deal of the credit for this report belongs to the five Asian coinvestigators—Rodolfo Bulatao, Chalio Buripakdi, Sung Jin Lee, Toshio

Iritani, and Tsong-Shien Wu. Others who contributed substantially to the project were Betty Jamie Chung, who designed and conducted the comparative analyses, and Lois Hoffman, a consultant to the project.

The Survey Research Office of the University of Hawaii cooperated in the fieldwork, and special thanks must be given to Janice Ledoux, field director, and David Johnson, field supervisor, for the success of the field operation. Processing of the Hawaii data was conducted primarily by Robert Bloedon, a former staff researcher at the East-West Population Institute. At later stages of the project, data processing was handled by Ann Midkiff, Douglas Kubota, and Fred Kau, under the general direction of Minja Chie.

Several research assistants, particularly John McHugh, Ahmad Mirjafari, and Linda Stalb, assisted in the tabular presentation of the data. Joan Choi and Ruby Ogawa handled the substantial secretarial work connected with the project.

Finally, we wish to thank Sandra Ward, publications officer of the East-West Population Institute, for her considerable editorial assistance, and Lois Bender, production assistant, for production of the manuscript.

Support for this research has been provided by the Ford Foundation and the U.S. Agency for International Development, the latter through an institutional contract with the East-West Population Institute.

1

background of the study and summary of findings

Children have always been such an integral part of life in every society that, until recently, not much thought was given to why people have children. Children were considered simply a natural consequence of biological processes. Childlessness was highly abnormal and married women who did not bear children were usually regarded with pity or disdain. As knowledge of contraceptive techniques has spread and large numbers of couples have begun to plan the number of children they will have, research on motivations for childbearing has become a legitimate, and even a necessary, pursuit.

Although childrearing practices and child development have been well covered in the social science literature, little attention has been paid to motivations that underlie decisions to bear children. In response to the need for basic research on the reasons for having children, a group of behavioral scientists from six countries began a collaborative research project in 1972, entitled the Value of Children (VOC) Study. The study was designed as an exploratory survey of the satisfactions and costs of children to parents in the Republic of China (Taiwan), Japan, the Republic of Korea, the Philippines, Thailand, and the United States (Hawaii). Details of the purpose and development of the VOC project, as well as a discussion of the conceptual framework for the study, are contained in Volume 1 of this series (Arnold et al., 1975), which also compares the principal data from all six countries.

The present volume reports only the results of the Hawaii VOC survey, conducted in late 1972 and early 1973.

Because of the multiracial character of Hawaii, it is an excellent location for an exploratory study of this type. Although Hawaii is insular, its population is cosmopolitan. No single ethnic group dominates the state and, in spite of some pockets of ethnic segregation, Hawaii must be described as a well-integrated society. For the VOC Study, three of the largest ethnic groups (Caucasians, Japanese, and Filipinos) were selected. Together these groups comprise more than 78 percent of the population of the Island of Oahu, where the VOC survey was conducted. Approximately equal numbers of respondents were chosen from each ethnic group to facilitate ethnic comparisons of how children are valued.

A desire for diversity in the characteristics of respondents led to stratification of the sample on the basis of socioeconomic status as well. In urban areas both middle-class and lower-class couples were interviewed, whereas in rural areas families engaged in agriculture (on sugar or pineapple plantations) were chosen. Practical considerations limited the sample to young married couples who had at least one child. Both wives and husbands were interviewed to obtain a balanced picture of motivations toward childbearing and to highlight similarities and differences in the orientation of women and men toward children.

The general purpose of the VOC study in Hawaii is to investigate comprehensively for the first time the social, psychological, and economic benefits and costs associated with having children. This diverse set of positive and negative factors is what we refer to as the "value of children." In this sense children are viewed in functional terms, as satisfying certain needs or functions for parents while at the same time they may be the source of significant costs or dysfunctions.

The primary objective of this report, then, is to outline the range of values that respondents in Hawaii attach to children and to investigate the relative salience and importance of these values. In addition we will endeavor to indicate the forces that help to shape a person's feelings about children. What role is played by ethnic background, socioeconomic status, sex, or the amount of education a person has received? How does experience with bearing and raising children affect one's orientation toward children? Where do age and life-cycle considerations enter the picture?

Although these questions are important by themselves, the most crucial question for demographers and policy makers concerns the extent to which the perceived value of children influences family-size

decisions. Can policies that are aimed at decreasing the benefits of children or increasing the actual or perceived costs of children induce couples to have fewer children? Would fertility decline if such alternatives to the satisfactions of children as ample career opportunities for women or communal living arrangements were available? The present study can provide only partial answers to most of these questions. Because the VOC Study is largely exploratory and because of the small, rather specialized nature of the VOC sample in Hawai'i, the findings reported below must be regarded as tentative rather than definitive. Their main value lies in suggesting directions for future studies on this topic that are currently being planned in the United States and a large number of other countries.

The conceptual model

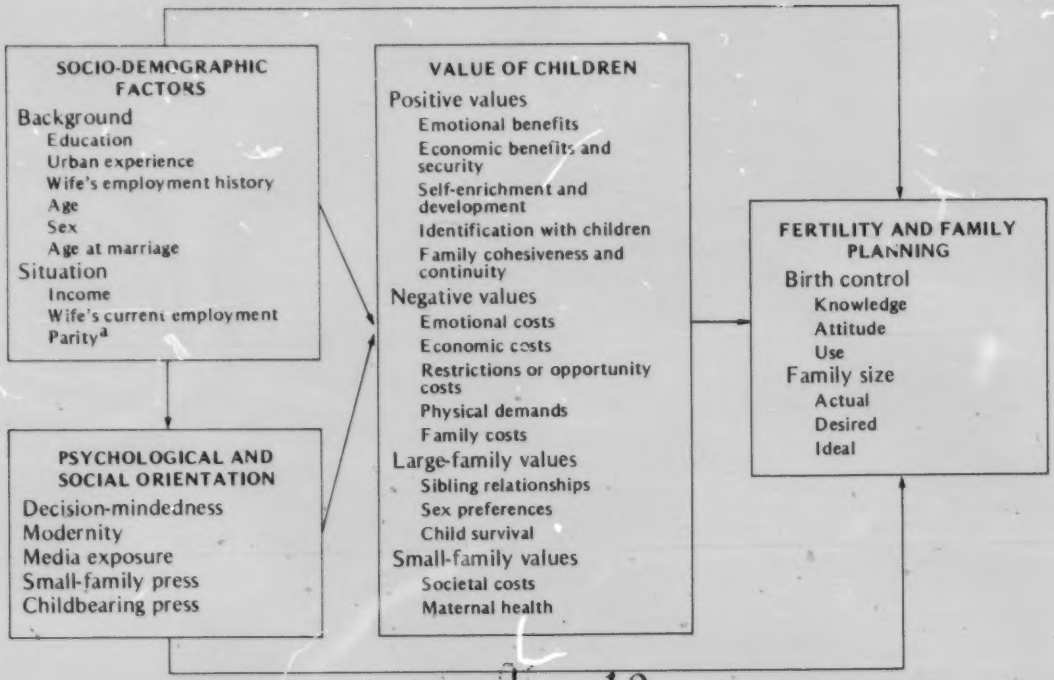
The relationships introduced above are best viewed in the larger context depicted in Figure 1.1. In this partial model, the value-of-children variables are posited as intervening between socio-demographic factors (including background and situational variables) and socio-psychological orientations on the one hand, and fertility attitudes and behavior on the other. The socio-demographic factors, in combination with an individual's general social and psychological orientation, are viewed as antecedents of the value-of-children dimensions.

The value of children itself is complex and may be divided into a number of different taxonomic schemes.[1] The classification presented in Figure 1.1 was developed on the basis of data collected in all six countries of the Value of Children Study. These categories are explained in more detail in Arnold et al. (1975). Briefly, the value of children is disaggregated into general positive values, general negative values, and values that are associated with either large or small families. Other important distinctions, not shown explicitly in the model, could be made between normative and personal values, the relative values of daughters and sons, or values associated with children of different ages. The proposed conceptual framework of Figure 1.1 is not intended to be a complete model of fertility behavior, but is primarily a heuristic device for suggesting research questions.

The model highlights four of the major areas of interest in the study of the value of children:

1 Two such schemes that have been proposed can be found in Hoffman and Hoffman (1973) and Bernard Berelson (n.d.).

Figure 1.1 Conceptual model for the Value of Children Study



a Parity may be considered a situational variable or a family-size variable, but not both at the same time.

1. What is the value of children? That is, what satisfactions are derived from having children and what costs are involved? To answer these questions entails an in-depth examination of the values of children outlined in the proposed model.
2. How are people's feelings about children related to their background and to their current situation? In other words, what are the relationships between socio-demographic factors and value-of-children variables?
3. To what extent are values of children associated with fertility and family planning behavior?
4. Looking at the model as a whole, what are the major determinants of family size and family planning decisions?

The major focus of this report is on the first of the four questions. In order to obtain baseline data on the value of children in Hawaii, interviews were conducted with 620 female and male respondents on Oahu. The interview questionnaire, which took an average of 85 minutes to administer, covered all of the areas outlined in the model. To evaluate various methods of gathering data on the value of children, several different types of questions were posed. These include open-ended questions on the advantages and disadvantages of children, which appear early in the questionnaire, Likert-type attitude items, items to be ranked, and several additional types of structured items. The rest of this chapter summarizes the principal findings of the Hawaii VOC Study, drawing on data from all sections of the questionnaire. A more detailed discussion of the survey and findings is presented in Chapters 2–6. Implications of the findings for policy and for future research are examined in Chapter 7.

Summary of findings

Respondents were generally quite interested in the subject of children and could talk about children with ease. Interviewers encountered no substantial resistance or anxiety even when asking questions about the disadvantages of children, child mortality, or the relative importance of children in respondents' lives. Respondents did show some hesitancy when answering open-ended questions about the advantages and disadvantages of having children, because many had never before consciously considered children in these terms. Their difficulty was perhaps typified by the embarrassment of a 25-year-old husband who was unable at first to think of a single reason why he wanted children even though he and his wife wanted to have five of them. Nevertheless, given sufficient time and encouragement, respondents were able to express their feelings about children quite satisfactorily.

Positive values of children. The benefits of having children expressed

by our respondents were both numerous and diverse. In fact, respondents were generally able to distinguish three or four distinct advantages that were salient to them. Children evidently serve multiple functions for their parents and they provide different kinds of satisfactions to different people. Among the value categories established in the VOC model, emotional benefits of children were clearly predominant for our respondents. The principal emotional benefits mentioned were the companionship that children provide to parents, the fun derived from playing with children, and children as a source of happiness. Looked at in a slightly different way, children were seen as reducing the loneliness, boredom, and unhappiness that might be characteristic of a life without them. Love and affection were also mentioned as advantages of having children but not as often as might be expected. Perhaps these values were perceived as being so obvious that respondents did not bother to mention them, or perhaps respondents were really thinking of love in the parent-child relationship when they mentioned companionship. Whatever the reason, love per se appears to have been a salient dimension only for Caucasian respondents. Wives were more apt to stress emotional factors than were husbands, but emotional benefits were highly salient even among male respondents.

In developing societies children are often regarded as economic necessities to parents in their old age and they are also expected to provide help on the farm or in the family business. On Oahu, however, the economic advantages of having children would appear to be minimal. Median family income is well over $12,000, retirement benefits are generally good, and there are few privately owned farms or family businesses. Therefore it is not surprising that most of our respondents exhibited a striking economic independence from their children. Few respondents expected to rely heavily on their children for old-age support and most did not expect any economic help from their children at any time in the future. Economic ties with children were still important among Filipino respondents, particularly those in rural areas, but not in any other group. According to Rosario (n.d.), Filipinos in Hawaii are distrustful of government aid and therefore do not avail themselves of the benefits of various government and welfare programs. Such an attitude toward government might explain the tendency among Filipino respondents in our sample to emphasize their reliance on children for economic support or at least for security in case they need help. Practical help expected from children (such as help with housework and help in taking care of other children) was also a highly salient advantage of children among Filipino respondents,

but it was more likely to be considered a useful by-product of having children rather than a reason for having them.

In addition to the emotional and economic benefits, VOC respondents described desirable changes that children can induce in parents themselves; these positive values of children are subsumed under the heading "self-enrichment and development" in our model. For many in the Hawaii sample, children were seen as providing a learning experience by helping parents learn more about themselves and about life. Character development of the parents was also viewed as an important function of children. Respondents said, for example, that children helped them to "settle down" and become more responsible and mature adults. Finally, children were seen as providing an incentive to succeed in life. In some cases this meant that children gave parents an incentive to work hard in order to provide for their children. In others, children were perceived as a basic reason for living, something to live for.

Other salient advantages cited by respondents are related to the identification of parents with children. Respondents reported gaining a great deal of pleasure from watching their children grow and develop and from guiding that development. This pleasure often entailed a feeling that children are part of their parents and that parents can see a reflection of themselves in their children.

Aside from the personal benefits to parents, children may also be considered beneficial to the family or to society. While family considerations were expressed fairly often by our respondents, societal influences were uniformly rejected. There may be social pressures to have children, or to have a large number of children, but respondents denied any substantial influence from society or religion, or even from friends and relatives. They regarded children as necessary, however, for cohesion and continuity of the family. Children were viewed as making the family complete and as the source of family life. Sons served the function of continuing the family name; husbands were particularly concerned with this function since of course it was their family name that was being carried on.

Negative values of children. Despite the multitude of benefits associated with having children, respondents clearly did not think that children were an unmixed blessing. In fact respondents in Hawaii expressed a great deal of ambivalence toward children. Children were said to impose on parents significant costs, both economic and noneconomic, which could not be ignored. While the actual number of

distinct disadvantages attributed to children was smaller than the number of advantages, the disadvantages were by no means inconsequential. There was simply greater agreement as to what those disadvantages were. Only a few respondents insisted that children entailed no disadvantages at all.

The major perceived disadvantages coincide with the first three categories of negative values listed in Figure 1.1: emotional costs, economic costs, and restrictions (or opportunity costs). Although there were variations in the degree to which each of these costs was felt by respondents in different socioeconomic and ethnic groups, every group affirmed that these costs were substantial.

Children may impose a variety of restrictions on their parents, including restrictions on work or a career, on social life and recreation, on time, and on travel. Most respondents spoke in more general terms, however, stating that children "tie you down" or "limit your freedom and flexibility" to do what you want. It should be noted that many of these restrictions are imposed largely by the first child. Subsequent children may intensify these restrictions or lengthen the time period in which they operate, but it is likely that high-parity births will create relatively few additional restrictions on parents. Thus, despite the perceived high opportunity costs of children, family-size decisions may not be very much affected by them.

Respondents were also well aware of the financial burden of children. A large proportion of respondents in every socioeconomic group found the financial costs of children to be a major disadvantage of having them. The majority said they could raise two children fairly easily, but three would create somewhat of a financial burden, and four would constitute a heavy financial burden. Economic costs may thus be a significant factor in family-size decisions, particularly beyond the second parity. In theory, parents with higher incomes tend to spend more money on their children both because they desire "higher quality" children and because their expenditures on children are tied to their own standard of living. The Hawaii data show a similar pattern of expenditures on children. Even respondents with higher incomes were quite conscious of the economic burden of children because they spent more on each child they had.

Although children were generally perceived as a financial burden, few respondents were able to quantify satisfactorily their actual expenditures on children. In several VOC pilot studies in Hawaii, questions about the actual cost of raising children (from birth through college, from birth through age five, etc.) were consistently unsuc-

cessful. Respondents were reluctant to answer these questions, and those who did seemed very unsure of their answers. The question finally chosen for the VOC survey concerned the more concrete costs of raising one's children during the previous 12 months. This question worked somewhat better, but many respondents still refused even to hazard a guess, and others indicated that their estimates were rather arbitrary. The responses should therefore be treated with some skepticism. It is nevertheless noteworthy that urban middle-class respondents estimated expenditures of over $1,200 per child per year compared with less than $900 estimated by rural (Filipino) respondents. Since urban middle-class respondents had fewer children and higher incomes, their expenditures on their children amounted to only about 15 percent of total family income, whereas rural Filipino respondents spent nearly one-third of their income on children. It is no wonder, then, that 90 percent of the latter group spontaneously mentioned financial costs as a disadvantage of having children.

In addition to financial and opportunity costs, there are a variety of emotional costs involved in raising children. Many respondents mentioned a general emotional strain, but they also spoke more specifically about problems of rearing and disciplining children, worry over the health of their children, and the noise and disorder that children create. At least some of the emotional burden is related to the physical work of caring for children. Women were more likely to mention the physical burden than were men since women usually bear the brunt of that burden.

Costs that might affect the family (such as less time with one's spouse or disagreement over rearing children) and costs that affect society (such as overpopulation) appear to have been less important to our respondents. As in the case of benefits of children it was the personal factors that were most salient.

Situation-specific values of children. The major positive and negative values of children discussed above are the factors that respondents mentioned spontaneously as benefits and costs of children and those that they stressed in answers to structured questions as well. Some of these values operate mostly in specific situations, however. Many benefits of children may be enjoyed by having only one or two children, while others require a large number of children. Similarly, some costs of children are substantial even in small families whereas other costs are associated mainly with larger family sizes. For example, most respondents indicated they could easily afford to raise two children, but

that additional children would become increasingly burdensome. Thus economic costs may not operate as a deterrent to having a small number of children but may become a substantial deterrent to having a large number. On the other hand, as we have already noted, restrictions on freedom and flexibility may not have much bearing on the decision about how many more children to have once a couple has already had one child.

In order to learn what factors enter into the decision of how many children to have, we asked respondents why they would not want more or fewer children than they actually desired. Parents generally did not want to have too few children because that might have an adverse effect on the children themselves. The belief that children need ample sibling companionship, which they cannot get in small families, was paramount. Just as respondents wanted to have children so that they themselves would not be lonely, they wanted to have a sufficient number of children so that children already born would not be lonely. Respondents also exhibited strong negative feelings about having an only child. For these reasons most respondents wanted to have a minimum of two children.

On the other hand, few respondents wanted to have what they considered to be a large family. Reasons for curtailing family size were primarily economic. In every socioeconomic and ethnic group financial costs of children were cited as the main reason for not wanting more children. This finding provides strong evidence that economic factors do enter into family-size decisions and that high economic costs of children can help to hold down people's family-size goals. Respondents also expressed the fear that if they had more children than they had decided on they would not be able to cope with them or to rear them properly. Concern about overpopulation also arose in this context, but it is difficult to tell to what extent the statements represented valid concerns or simply a desire to give socially acceptable responses.

Values of daughters and sons. While certain values of children are functional in only a small family situation or a large family situation, other values may be associated primarily with children of a particular sex. For example, in many developing countries tradition requires sons to perform specified religious and death rites, to support their parents in old age, or to keep the family name going. For these and other reasons, a strong preference for boys has emerged in many cultures. Preference for male children tends to diminish as a country develops economically and moves in the direction of legal, economic, and social

equality between the sexes. In the Hawaii VOC sample there was only a slight residue of boy preference, which manifested itself mainly in the order in which respondents wished to have their children rather than in the number of boys or girls they wanted.

The relative lack of preference among respondents for children of a particular sex does not mean that sons and daughters were valued for the same purposes or that they were being raised in the same way. On the contrary, respondents wanted sons and daughters for very different reasons and their children tended to be socialized into traditional sex roles. Daughters were regarded as companions for the mother and were expected to help the mother with household tasks. Their function of providing practical help was most salient to Filipino respondents, who overwhelmingly stressed this particular value of girls. Daughters were also valued for a variety of intrinsic qualities thought to be characteristic of girls—for example, gentleness, sweetness, and loyalty.

Sons, on the other hand, were valued primarily for the function of carrying on the family name. It is striking that respondents in every socioeconomic and ethnic group gave primary emphasis to continuity of family name as a reason for wanting sons. Sons were also valued for providing companionship to their fathers. They were not generally valued for helping around the house except by Filipino respondents, and even when they were expected to perform chores, the nature of the chores was qualitatively different from those performed by daughters. Finally, sons were perceived to possess some desirable personality and behavioral qualities but to a much smaller extent than daughters.

Subgroup differences in the value of children. All of the above findings are based on data from the overall sample with particular emphasis on the values held by urban middle-class respondents, who represented a much larger proportion of the population on Oahu than either the urban lower-class or the rural respondents. One of the main purposes of this study is to explore similarities and differences in feeling about children among parents in different ethnic and socioeconomic groups and also differences between husbands and wives. Our data show that certain values of children were more or less universal in our sample, whereas other values were particularly strong among respondents of a particular sex, ethnic, or socioeconomic (SES) group.

Comparing husbands and wives first, we observe that similarities in their motivations for having children far outweighed any differences. In every context throughout the study women and men exhibited a strikingly similar orientation toward children. Some differences,

mostly relating to the different sex roles assumed by female and male respondents, were significant and pervasive. For example, male respondents placed more emphasis on children as an incentive to succeed in life and as a medium for transmitting the family name to future generations; women were more apt to stress companionship and other emotional benefits as well as old-age support[2] on the positive side, and emotional burdens, physical demands, career limitations, and marital problems on the negative side. But these differences were minor compared with the similarities.

Ethnic and SES differences were considerably more pronounced. If we place urban middle-class respondents at the top end of the SES scale and rural respondents at the bottom,[3] then economic and practical help from children, the perceived economic burden of children, and the importance of children to continue the family name were all negatively related to socioeconomic status. Thus the economic utility of children appears to be attenuated as one moves up the socioeconomic scale, but the economic burden of children also declines. Under these circumstances the net economic value of children (perceived benefits minus perceived costs) may not be much greater for lower SES couples than it is for higher SES couples. Respondents toward the higher end of the SES scale valued children more for the learning experience they provide to parents and for their contribution to family life. But they also showed more concern about the emotional strain of raising children and about overpopulation.

Oahu is a small and relatively well-integrated island, but distinct cultural patterns can be observed, at least with respect to the value of children. In general, Japanese and Caucasian respondents shared a rather similar orientation toward children, although some consistent differences were evident. In contrast, Filipino respondents tended to be far more traditional in their attitudes toward children and less likely to consider alternatives to having children than either the Japanese or the Caucasians. Filipinos are relative newcomers to Hawaii, most of them having migrated to Hawaii within the last three or four decades. (For a comparison of Filipino respondents in Hawaii and Filipino respondents in the Philippines, see Arnold et al., 1975, and Bulatao,

2 According to the Rajpur Village Study in India, mothers were similarly much more likely than fathers to stress economic security in old age as an advantage of having many children (Poffenberger and Poffenberger, 1973).

3 This is a realistic ranking on the basis of income levels, educational attainment, and occupational status.

1975.) Well over three-quarters of the Filipino respondents were born in the Philippines and they had not readily assimilated the values common to other large ethnic groups in Hawaii. Filipinos constituted the only group in our sample who expressed substantial reliance on children for economic and practical help, particularly in old age. They were also more apt to emphasize certain emotional benefits of children (such as happiness and companionship) and the importance of children to carry on the family name than were the other ethnic groups. Although the financial costs of children, the physical work involved in rearing them, and disciplinary problems were particularly burdensome to Filipino respondents, they did not feel so constrained as the other groups by having children. Perhaps the restrictions caused by children were less important to them because their lives were built more around the family.

Caucasian respondents generally represented the opposite end of the spectrum, with Japanese respondents falling somewhere in between but usually quite close to the Caucasian point of view. Japanese respondents had particularly strong feelings in two areas. On the positive side, they stressed the relaxation and fun of playing with children and, on the negative side, the monopoly children have on parents' time. (These feelings were shared by Japanese respondents in Japan. See Iritani, 1975.) Caucasians saw children in somewhat less instrumental, or utilitarian, terms than did the Filipinos in our sample. They were more expressive about the pleasure they derived from watching their children grow and develop and from helping them develop in the right direction. Raising children was looked upon as a learning experience by both Caucasians and Japanese, but not by Filipinos.

The relatively small number of respondents in each ethnic group makes these conclusions somewhat tentative. Many differences among the three groups in the value of children were striking, however, and it is clear that children may serve very different functions for parents from different ethnic backgrounds. All of the results discussed thus far relate to the first of the four questions posed earlier in this chapter (i.e., what is the value of children?). The remainder of the chapter summarizes findings on how the value of children is related to sociodemographic factors, social-psychological orientation, and fertility and family planning (see Figure 1.1).

The social context, the value of children, and fertility. The feelings people have about children are presumably shaped by both their backgrounds and their current living situations. While this study can say

very little about how values about children are actually formed, correlational analysis can indicate what background and situational factors are related to those values. In our Hawaii sample, the two background characteristics most strongly related to various dimensions of the value of children were educational attainment and urban experience (defined as the proportion of one's life spent in urban areas). Three additional factors—age, duration of marriage, and family income—were also associated with the value-of-children dimensions, but the relationships were generally weaker.

Respondents with more education and more urban experience tended to de-emphasize many of the traditional reasons for wanting children. They were particularly unlikely to want additional children for economic help, for care in old age, or for continuing the family name and traditions. On the cost side, these more "modern" respondents did not feel the economic burden of children as much as others, probably because they had fewer children and more resources with which to bring them up. Nevertheless, they were more likely to feel that the costs of children should be considered in decisions about how many children to have. A number of noneconomic costs seemed to be particularly salient to respondents with more education and more urban experience. These respondents expressed concern about overpopulation and also stressed the deleterious effect additional children might have on their emotional well-being and on their marital relationships.

To the extent that individuals make rational decisions about family size, the values they attach to children should have some influence on their childbearing decisions. We would expect those who see a multitude of important benefits deriving from children and who minimize costs to want large families, while those who feel burdened by the costs and see few benefits in having a large number of children to want small families. If these benefits and costs are defined broadly enough to encompass economic, psychological, and social dimensions of the value of children, then the relationship between the value-of-children measures and family-size goals should be quite strong. In this study, these relationships were examined in two ways. First, the association between the value of children and fertility-related variables was explored by means of correlational analysis. Second, the net effect of the value of children was investigated in the context of the larger model discussed earlier. Because of the specialized nature of the Hawaii sample and because this study was exploratory, no attempt was made to test the proposed model rigorously. Rather, the results should be

considered illustrative of the potential explanatory power of the value-of-children variables.

Correlational analysis revealed that respondents with traditional attitudes about fertility (i.e., those who desired a large family and disapproved of birth control) valued children for the continuity and security they provide, for their reinforcement of the parents' sex roles, for the incentives to succeed in life they give their parents, and for the happiness, affection, and other satisfactions parents derive from children. Those respondents also felt particularly subject to external pressures to have children and were less likely than other respondents to consider alternatives to having children. The fertility variables were most highly correlated with three strong traditional motivations for wanting children—continuity of the family name and traditions, care in old age, and economic help for the family. These motivations tend to diminish in importance with economic development and modernization, and only the Filipino respondents in Hawaii still held strongly to these values.

A number of multiple regression analyses were conducted to explore the potential influence of value-of-children measures on fertility and family planning attitudes and behavior. The regressions included standard background variables (education, income, urban experience, age, and duration of marriage) as antecedents, the value-of-children dimensions as intervening variables, and several fertility-related measures (parity, number of additional children wanted, total number of children wanted, attitudes toward contraception, and current contraceptive use) as consequents. When the first two sets of variables were used separately as predictors, the value-of-children measures were indeed potent. In fact, for three of the five dependent variables, the value-of-children measures explained a substantially larger proportion of the variance than did the traditionally important socio-demographic variables. When the value-of-children measures were added to the socio-demographic variables, the percentage of variance explained increased considerably. In other words, the economic and psychological-social values of children together added substantial explanatory power in the prediction of family size and family planning attitudes and behavior, even after the socio-demographic variables had been taken into account.

The perceived economic benefits and costs of children appear to have been particularly important determinants of family size and contraceptive use for respondents. Economic motives evidently do play an important role in fertility decisions for some people in Hawaii.

Psychological and social values of children were found to have a relatively weak effect in most cases, but they did retain an important net influence in the prediction of attitudes toward birth control.

It should be noted that many of the value-of-children measures in this study were innovative and experimental. The experience gained in the first phase of our research has permitted the development of improved measures of the value of children for continuing studies. But even the imperfect measures used in this study indicate that fertility and family planning decisions are made at least partly on the basis of the perceived satisfactions and costs of children. Further research in this area will help to increase our understanding of the determinants of fertility behavior and will serve as a guide to population policies and programs.

2

sample and methodology

Sample selection

Because the Value of Children project was an exploratory study with a limited budget, it was not possible to interview large numbers of people in each participating country. In addition, it seemed desirable to interview respondents from several different ethnic and socioeconomic groups in Hawaii. These considerations led us to impose certain restrictions on the sampling universe to insure that there would be a large enough number of respondents in each subgroup studied. A decision was made to interview only young married couples who already had at least one child. Age requirements were 20–34 for wives and 20–44 for husbands. To permit ethnic comparisons, the sample design called for approximately equal numbers of Filipino, Japanese, and Caucasian respondents. Japanese and Caucasian respondents were chosen from middle- and lower-class urban areas, while Filipino respondents were selected from lower-class urban and rural agricultural areas.

The distribution of major occupational categories from the 1970 U.S. Census of Population and Housing was used to determine the social class assigned to each census tract on Oahu (United States, Bureau of the Census, 1972: Table P-3). These occupational categories were weighted by the Socio-Economic Achievement (SEA) scores developed by Donald Bogue. The SEA scores, which are based on the average income and education of employed persons in each occupational category, "together . . . are able to provide a comparatively sensitive measure of the status level that individuals or groups have achieved"

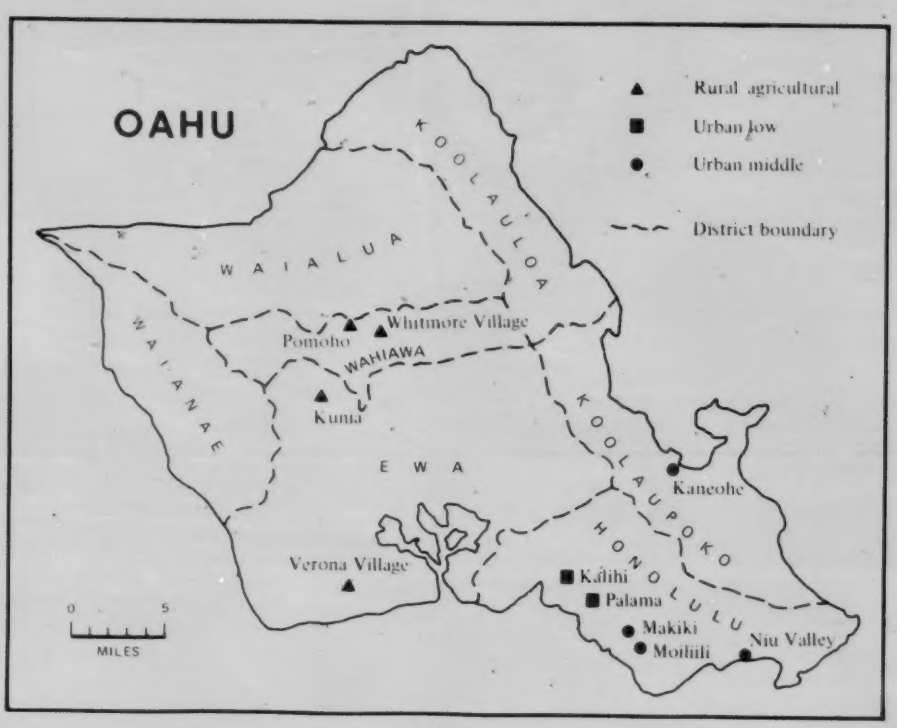
(Bogue, 1969:439). All urbanized census tracts[1] were arrayed according to their mean SEA scores. Tracts with mean SEA scores more than one standard deviation below the mean were defined as lower class, those with mean SEA scores more than one standard deviation above the mean were defined as upper class (and therefore deleted), and the rest were assigned to the middle class.

Because of the ethnic requirements of the sample design, it was necessary to select areas that had a good mix of the ethnic groups being studied. Therefore, for the lower class the universe consisted of all tracts having more than 13 percent each of Filipinos, Japanese, and Caucasians. For the middle class, tracts were required to have more than 25 percent each of Caucasians and Japanese. All of the lower-class tracts fulfilling these requirements became sample tracts, but only a subsample of the middle-class tracts was used. First, five middle-class tracts were chosen with a probability of selection proportional to the size of the total Japanese and Caucasian population in each tract. Within each middle-class tract, census blocks were chosen with a probability proportional to the size of the *total* block population (since ethnic breakdowns in the census were not reported at the block level). Block populations were obtained from United States Bureau of the Census (1971a). The neighborhoods selected for the lower-class sample were all in the Kalihi-Palama district, which is generally recognized as the poorest area of Honolulu. The middle-class neighborhoods chosen included two centrally located areas, Makiki and Moiliili, and two suburban areas, Niu Valley and Kaneohe. Kaneohe is about 15 miles from Honolulu, across the Koolau Mountains, but it is economically well integrated with Honolulu. Sample districts selected for the Hawaii sample are shown in Figure 2.1.

Areas for the rural sample were most difficult to select. Because there are few privately owned and individually operated farms on Oahu, only plantation workers could be interviewed. The two rural census tracts with the largest percentage of farm workers, Wahiawa (30.6 percent) and Ewa (13.8 percent), were selected for the sample. Wahiawa is a pineapple plantation area in the central plain of Oahu and Ewa is a sugar cane area west of Honolulu. Because of the diffi-

1 An urbanized area consists of a central city, or cities, and surrounding closely settled territory. This excludes certain urban census tracts in places of 2,500 or more inhabitants outside urbanized areas. For the purposes of this report "urban" will be used as a convenient shorthand to refer to populations living in urbanized areas.

Figure 2.1 Socioeconomic groups surveyed, by sample district: Hawaii



BEST COPY AVAILABLE

culty of finding young married agricultural workers, interviewers were given some latitude in the neighborhoods they screened for eligible respondents. The sampling design in rural areas was thus somewhat less rigorous than the design followed in urban areas.

Even though the sample areas were chosen to ensure a reasonable number of eligible respondents, the rather strict eligibility criteria necessitated an extensive screening process. It was necessary for interviewers to visit more than 7,000 households in the sample areas before a sufficient number of eligible couples were identified. The screening operation was conducted one to two months before final interviewing and was carried out by a separate set of enumerators. A short screening interview was conducted at every household in the sample blocks. The screening questionnaire, reproduced in Appendix A, was designed in such a way that the enumerator could promptly terminate the interview upon discovering there were no eligible couples in the household.

Results of the screening interviews in urban areas are shown in Table 2.1. Of a total of 7,370 households screened, only 6.3 percent were found to have eligible couples. The rest were disqualified either because they did not meet the eligibility criteria (73.4 percent) or be-

Table 2.1 Results of household screening in urban census tracts

Result	Number of households
Total screened	7,370
Not contacted	1,497
No one at home	924
Refusal, vacant unit, other reasons	573
Disqualified	5,412
No married couple	1,435
Couple not living together	178
No children	911
Ineligible age group	2,208
Ineligible ethnic background	545
Temporary resident (military)	108
Other reasons	27
Eligible	461

cause they could not be contacted (20.3 percent). Noncontacts were due principally to families' not being at home during either of two visits by the interviewers, and, to a lesser extent, to refusals, vacant units, or other reasons. The reasons for disqualifying persons who were contacted are also shown in Table 2.1, each line of which refers only to households that were eligible according to the criterion immediately above that line. For example, 2,208 households were disqualified because of the age of the married couple. Other households were ineligible on account of age as well, but they had already been disqualified for other reasons (no married couples, spouse not present, or no children). Two additional points should be made about the criteria for eligibility. Couples were eligible only if both the wife and the husband were at least 50 percent Japanese or Caucasian, or 100 percent Filipino; and respondents in the armed forces were excluded if they were temporarily stationed in Hawaii but included if Hawaii was considered their usual home.

In all, 461 households in urban areas were found to have eligible couples (three households had two eligible couples each). Since there was an overabundance of eligible lower-class urban Filipino respondents, a random subsample was chosen, and 65 eligible couples were not assigned to interviewers. In addition, it was later found that 25 couples who had been considered eligible according to the screening interviews in fact were not at least 50 percent Japanese, Caucasian, or Filipino, and they were subsequently eliminated from the study.

Response rates

Response rates among eligible respondents in urban and rural areas are shown in Table 2.2. Of 848 eligible respondents (424 couples), 621, or 73 percent, were successfully interviewed. They included 278 couples and 65 husbands or wives whose spouses could not be interviewed. Refusals ran relatively high, at 16 percent, but fluctuated considerably from one ethnic-SES subgroup to another. The refusal rate was highest among Japanese (23 percent), high also among Caucasians (19 percent), and lowest among Filipinos (4 percent). The rural Filipino group was most cooperative, with only one person refusing among 100 eligible respondents. When one spouse refused to be interviewed, it was the husband in 87 percent of all cases. The high refusal rate was due partly to the lack of experience of interviewers and partly to the inopportune season when fieldwork was conducted. Because of the

Table 2.2 Response rates among eligible respondents, by socioeconomic and ethnic group

Interview outcome	Urban middle		Urban low			Rural	All
	Caucasian	Japanese	Caucasian	Japanese	Filipino	Filipino	respondents
1 Eligible respondents assigned to interviewers	184	156	130	120	158	100	848
2 Both spouses interviewed	112	100	84	50	128	82	556
3 Only one spouse available for interview	15	12	13	21	2	2	65
4 Refusals	38	33	22	30	10	1	134
5 Not at home	2	2	6	5	0	0	15
6 Not interviewed for other reasons	17	9	5	14	18	15	78
7 Refusal rate (4/1)	21%	21%	17%	25%	6%	1%	16%
8 Completion rate (2+3/1)	69%	72%	75%	59%	82%	84%	73%

necessity of conducting fieldwork at approximately the same time in all six VOC countries, interviewing in Hawaii began around Thanksgiving Day, 1972, and continued into January 1973. This holiday season is the busiest time of year for most people, and many respondents declined to be interviewed because they did not have enough free time.

Interviewers were required to return at least five times to find respondents who were not at home. Thus fewer than 2 percent of respondents were ultimately listed as not interviewed because they were not found at home. Seventy-eight respondents (9 percent of the total) could not be interviewed for other reasons (e.g., language problems, no longer at address).

When the fieldwork was finished, completed questionnaires were examined to see if the original SES classification, according to geographic area, was satisfactory. In most cases, respondents living in lower-class areas were decidedly lower-class according to education, income, and occupation. Similarly, most of those living in middle-class areas had the standard characteristics of middle-class families. The sample areas were not totally homogeneous, however, and some changes in social-class designation were in order. On the basis of education and income of both husbands and wives, 12 percent of the respondents in lower-class areas were designated as middle SES and 20 percent of respondents in middle-class areas were designated lower SES.

As a result of the adjustment for social class, a number of Filipino couples from lower-class areas were designated as middle class, a group that was not included in the Hawaii sample. In addition, after the fieldwork was completed it was discovered that several couples who had been interviewed did not strictly meet the ethnicity criteria for the sample. In most of these cases the couples were reported as eligible according to the screening interview, but not according to the respondents' own reports in the final interview. Conflicting reports on ethnic background are not surprising in Hawaii, where racial intermarriage has been relatively common and where people often do not have a clear idea of their precise ethnic origins. In addition, the respondent in the screening interview was sometimes a relative or neighbor, who could not be expected to report accurately on the couple's ethnic background. In all, 63 respondents did not strictly fit the criteria for any of the six ethnic-SES subgroups. They constitute a residual ethnic-SES subgroup that is not analyzed separately in this report and is, therefore, not included as a separate subgroup in the tables. They

are included in all tabulations reported for the total sample and for female and male respondents, however.

Field personnel and fieldwork

Two sets of interviewers were selected for the screening and for final interviewing operations, and different qualifications were required of each group. For the screening stage, 13 interviewers, mostly undergraduate students at the University of Hawaii, were employed. Only a single three-hour training session was necessary at this stage because of the relatively simple procedures involved. The screening operation was coordinated by the Survey Research Office (SRO) at the University of Hawaii.

For the final interviewing operation, 19 interviewers were selected out of more than 200 who applied for the job. Because of the full-time nature of the work, registered University students were not eligible, but all of those hired had attended a college or university and most were college graduates. Twelve of the interviewers were female and seven were male. In most cases, interviewers were ethnically matched with respondents to facilitate rapport. Seven of the interviewers were Caucasian, six Japanese, and six Filipino.

Most interviewers had no prior interviewing experience, but all of them were put through a rigorous five-day training course in November 1972. The course included lectures, demonstrations, and role-playing interviews. In addition, each interviewer was required to complete at least two practice interviews before going into the field. Most of a 70-page interviewer's manual was prepared before the training course began, but sections were not distributed until the day after they had been discussed in a training session. In this way questions or problems that arose during the session could be incorporated into the manual, making it a more vital and useful document.

Field operations for this stage were again coordinated by the Survey Research Office at the University of Hawaii. The field director was a full-time staff member of SRO. Each interviewer was assigned to one of four field supervisors. One supervisor was a codirector of the Hawaii VOC project, two were research assistants for the project (both Ph.D. candidates in psychology), and the fourth was a staff member at SRO (also a Ph.D. candidate).

Most of the fieldwork was conducted between November 1972 and January 1973, with a few interviews taking place in February and March 1973. After all interviews had been completed, interviewers were extensively debriefed. The debriefing helped the investigators to

evaluate the quality of the data, highlighted certain problem areas, and should be particularly useful in designing future research. Interviewers were also required to supply certain information about the interviewing situation and to write a thumbnail sketch of each interview after it was completed. They rated respondents as cooperative or very cooperative in 97 percent of all cases, rapport between interviewer and respondents as good to excellent in 90 percent of the cases, and interest in the content of the interview as moderate to high 93 percent of the time. Thus, although the initial refusal rate was high, once an interview was started the results were quite satisfactory.

The questionnaire

The core questionnaire used in all countries is reproduced in its entirety in Arnold et al. (1975). Additional questions used in the Hawaii questionnaire are reproduced in Appendix B; they were added to reflect the unique cultural situation in Hawaii and the particular research interests of the Hawaii project directors. Altogether the Hawaii questionnaire is 35 pages long and contains over 300 items, more than 80 percent of which are core questions. Since many of the questions were intended only for certain subgroups of respondents, no one was asked the full complement of questions. Nevertheless, the time required for each interview averaged one hour and twenty-two minutes in urban areas and one hour and forty minutes in rural areas.

The final questionnaire was the result of many months of pilot studies, pretests, conferences, analyses, and discussions. The core items were designed collaboratively by project directors in all six countries and modified in accordance with the results of pretests in all the countries. The main content of the Hawaii questionnaire can be summarized under the following section headings:

1. Screening for eligibility (6 items)
2. Name, sex, and birth date of each own or adopted child (2 items)
3. Influences on children from home (1 item, an open-ended warm-up question)
4. Advantages and disadvantages of children (4 items, open-ended)
5. Desired family size—desired number of children and reasons for wanting or not wanting additional children (61 items)
6. Ideal family size and composition (27 items)
7. Opinions about children (45 Likert-type attitude items)
8. Knowledge, attitudes, and practice of birth control and abortion (59 items)
9. Economic considerations (25 items)
10. Education and educational aspirations for children (12 items)

11. Background characteristics–current age, age at marriage, widowhood and divorce, ethnicity, residence, family structure, family of orientation (14 items)
12. Family decision-making, husband-wife influence on decisions (6 items)
13. General opinions–Overall Modernity Scale, alternatives to children (15 items)
14. Religious affiliation and religiosity (3 items)
15. Employment–husband's occupation, wife's employment history, reasons for working or not working, job satisfaction, income (70 items)
16. Pregnancy history (6 items)
17. Family economic status–total family income, adequacy of income, relative income, savings, ownership of consumer durables, housing arrangements (17 items)
18. Effects of having children–change in feelings about children as a result of experience of having children (2 items)
19. Interviewer notes (9 items).

The 45 attitude items on children (section 7) were re-administered to a subsample of Caucasian and Japanese respondents by mail to check the reliability of the items. An analysis of the results is in progress.

The entire questionnaire was translated into Ilocano for use with Filipino respondents where necessary. It was translated independently by two translators and back-translated by a third. Differences between the two translations and between the original English and the back-translation were reconciled by the translators in consultation with the project directors. Most differences of opinion among the translators concerned style rather than content, so that the basic goal of conceptual equivalence was probably achieved satisfactorily. However, additional independent opinions should have been sought so that a reasonable consensus could have been reached.

Data processing

All questionnaires were checked for accuracy first by the interviewer, then by the field supervisor, and finally by an editor in the Survey Research Office. At the next stage, 24 students were hired to code the questionnaires. Codes for core questions were developed collaboratively by all project directors and applied in all countries with only minor changes. Construction of the codes was based on theoretical considerations and empirical results. Each questionnaire was fully coded independently by two coders to insure results of high quality. The two codings were compared by a third person and differences were reconciled by the coding supervisors. The reconciled data were keypunched and verified; 23 IBM cards were used per respondent. Several consistency checks were run on the data, and after the data were cleaned up they were stored on magnetic tapes and disk files.

Files were set up in such a way that they could be readily used as input to programs in the Statistical Package for the Social Sciences (SPSS). (See Nie, Bent, and Hull, 1970.) SPSS programs were used for most analyses and the University of Hawaii IBM 360/65 computer was used for all data processing and analysis of the Hawaii data.

Some demographic characteristics of respondents

Table 2.3 presents a demographic overview of the subgroups in the Hawaii sample, beginning with birthplace of respondents. Over the past several decades, Hawaii has been the destination of streams of migrants from the Philippines, the U.S. mainland, Samoa, and other parts of the world. According to the 1970 census, fewer than 60 percent of persons living on Oahu were actually born in Hawaii (United States Bureau of the Census, 1971b: Table 119). In the VOC sample only half of all respondents were born in Hawaii and fewer than 40 percent were born on the island of Oahu where the survey was conducted. There are important differences in place of birth by ethnic group, however. Japanese respondents were the only group who could claim Hawaii as their homeland. Over 90 percent of them were born in Hawaii, most on Oahu. In contrast, Filipino respondents were typically born in the Philippines, and most of the Caucasians migrated to Hawaii from the U.S. mainland.

Many urban respondents had been born on farms and later moved to a city, but a majority of urban dwellers in the sample had lived in urban areas their whole lives. Practically all rural respondents, on the other hand, were born in rural areas and few had spent any part of their lives in a city. On the average, rural respondents had spent 97 percent of their lives in rural areas. Women had spent a larger proportion of their lives in urban areas than their husbands, probably because they were younger on the average. (Thus if husbands and wives had spent the same number of years in cities, wives would have spent a larger percentage of their lives in cities.)

Because of the eligibility requirements imposed on the sample, the average age of respondents was only 30. Male respondents were more than three years older than their wives, on the average, and there were significant age differences among the ethnic-SES groups as well. By far the oldest group were the rural Filipinos, with an average age of 33.7 years. Urban lower-class Filipinos were also somewhat older than other respondents and Japanese respondents were more than one year older than their Caucasian counterparts.

The mean age at first marriage among couples interviewed in Hawaii

Table 2.3 Selected characteristics of respondents, by socioeconomic and ethnic group and by sex

Characteristic	Urban middle		Urban low			Rural			
	Caucasian (N=95)	Japanese (N=98)	Caucasian (N=87)	Japanese (N=76)	Filipino (N=117)	Filipino (N=84)	Female[a] (N=330)	Male[a] (N=290)	All respondents[a] (N=620)
Birthplace (percentage of total)									
Oahu	24.2	64.3	47.7	75.0	14.5	3.6	37.6	40.0	38.7
Other Hawaii	6.3	27.5	3.5	17.1	8.5	3.6	11.3	12.4	11.8
U.S. mainland	60.0	3.1	47.7	2.6	0.0	3.6	18.6	17.6	18.1
Philippines	0.0	0.0	0.0	0.0	76.1	89.2	28.0	27.2	27.7
Other	9.5	5.1	1.1	5.3	0.9	0.0	4.5	2.8	3.7
All birthplaces	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Percentage of life spent in urban areas	87.0	84.3	83.7	88.9	77.6	3.2	75.8	69.9	73.1
Mean age	29.4	30.8	28.1	29.3	30.6	33.7	28.5	31.8	30.1
Mean age at marriage	21.5	23.8	20.1	21.4	23.4	22.1	20.6	23.8	22.1
Average number of living children	2.0	2.0	2.5	2.0	2.4	3.2	2.3	2.3	2.3
Average educational attainment (in years of completed schooling)	14.0	13.6	11.7	12.3	10.7	7.0	11.7	11.6	11.7
Occupation (percentage of total)									
Professional, technical, and kindred workers	33.7	22.7	10.5	5.3	2.6	0.0	10.4	16.6	13.3
Managers, officials, and proprietors	5.3	15.5	0.0	5.3	0.9	0.0	1.8	7.2	4.4

Sales workers	4.2	4.1	7.0	9.4	6.0	2.4	7.1	4.1	5.7
Craftsmen, foremen, and kindred workers	10.5	14.4	17.4	17.3	9.4	0.0	1.8	22.8	11.7
Clerical and kindred workers	25.2	30.9	23.2	28.0	11.1	2.4	34.0	4.5	20.1
Operatives and kindred workers	4.2	3.1	8.1	6.7	11.1	9.6	3.4	12.1	7.5
Service workers except private household	7.4	6.2	10.5	6.7	23.1	2.4	12.6	7.6	10.2
Laborers except farm	2.1	1.0	7.0	5.3	20.5	3.6	4.0	11.4	7.5
Farm laborers	0.0	0.0	0.0	0.0	0.0	68.7	5.8	13.1	9.3
Private household workers	2.1	0.0	4.7	5.3	0.9	0.0	3.4	0.3	1.9
Not employed since marriage	5.3	2.1	11.6	10.7	14.4	10.9	15.7	0.3	8.4
All occupations	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average family income (U.S. dollars)	15,393	15,188	9,176	11,058	9,991	8,930	na	na	11,623
Percentage of wives currently employed	43.4	50.0	37.2	35.6	45.8	26.2	na	na	41.2
Religion (percentage of total)									
Catholic	41.0	2.0	54.0	5.3	83.8	95.2	51.5	47.3	49.5
Protestant	33.7	37.8	26.4	34.2	5.1	2.4	21.2	23.8	22.4
Buddhist	0.0	40.8	2.3	36.8	0.0	0.0	12.1	11.0	11.6
Agnostic or atheist	11.6	15.3	8.1	15.8	0.0	0.0	4.9	11.0	7.8
Other	13.7	4.1	9.2	7.9	11.1	2.4	10.3	6.9	8.7
All religions	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

na—not applicable.

a Includes a small number of respondents who did not belong to any of the six ethnic-SES subgroups in the Hawaii sample.

was 22 years, with three-quarters of all respondents marrying between the ages of 18 and 25. Most women married at younger ages than their husbands; the average difference in their ages at marriage was 3.2 years. Caucasian respondents married at younger ages than Japanese respondents, and lower-class respondents tended to marry at earlier ages than middle-class respondents.

The average rural Filipino couple had been married for more than 11 years, compared with seven or eight years for urban couples. This difference was partly responsible for the much higher parity among rural Filipinos (3.2 children) than among middle-class couples and urban lower-class Japanese (about two children on average). Parity of the remaining groups fell somewhere in between.

Differences in social status are reflected in the data on education, occupation, and income. Male and female respondents of the same social status generally had the same amount of education, but differences in educational background among the social classes were substantial. Middle-class respondents had an average educational attainment of nearly 14 years, and most of them had gone to college. More than three-quarters of the lower-class Japanese and Caucasians were high school graduates, but they lagged considerably behind middle-class respondents in educational attainment. Filipinos had the least amount of schooling—particularly rural Filipinos, who had an average of only 7.0 years of education. It should be noted that many Filipinos had received their education in the Philippines, where only 10 years are required for a high school diploma and 14 years for a college degree. Nevertheless, one-fourth of lower-class urban Filipinos and 81 percent of rural Filipinos had received less than 10 years of formal education.

The relatively poor education of Filipino respondents, coupled with their status as a recent immigrant group to Hawaii, led to low-paying, low-status jobs for them. An overwhelming majority of rural Filipinos were engaged in farm labor. Husbands were required to be employed in agricultural work in order to be eligible for the sample, but many wives also worked in the fields or plantation factories. Most of the rural women had worked at some time since marrying, but only 26.2 percent were working at the time of the survey, the lowest proportion of any group interviewed. The average family income for this group was below $9,000 per year. Lower-class urban Filipinos were also overrepresented in low-status occupations, mainly as service workers (23.1 percent) and laborers (20.5 percent). Only 3.5 percent were in professional or managerial positions. Average income for this group was slightly less than $10,000, even though nearly half the wives held jobs to augment family income.

Lower-class Caucasians and Japanese were predominantly clerical workers and craftsmen, with smaller numbers of workers spread throughout the occupational structure. More than one-third of the women in both of these groups were working at the time of the interview. Despite the similar occupational structure of the two groups, the average estimate of total family income among Japanese respondents was considerably higher ($11,058) than that of the Caucasian respondents ($9,176).

Urban middle-class respondents reported incomes of over $15,000, a result of both high-paying jobs and a high percentage of working wives. The largest proportion of this group were in professional, clerical, and managerial positions. More middle-class Caucasian respondents were employed in the professions than were middle-class Japanese respondents, but a larger percentage of Japanese were in managerial positions.

The occupational distribution for men and women revealed vast differences. Many more women than men worked in clerical jobs and somewhat more worked in service and sales jobs. Men, on the other hand, were employed more often as craftsmen and also as professionals, managers, operatives, and laborers. Women in our sample had made some inroads into the traditionally male-dominated professions, but a large majority still held secretarial positions.

Religious preferences differed greatly among the ethnic groups interviewed. Filipino respondents were predominantly Catholic. A few were Protestants or members of other religions, but not a single Filipino respondent claimed to be an atheist or an agnostic. Japanese respondents were split about evenly between Buddhism and Protestantism, but about 15 percent did not profess any religion. In the Caucasian group, almost half were Catholic and most of the rest were Protestant. Again, there was a small minority of agnostics and atheists (about 10 percent).

Profiles of sample subgroups

The six ethnic-SES subgroups shown in Table 2.3 will be discussed separately throughout the rest of this report. It may be useful, therefore, to present a brief profile of each group's background characteristics.

Urban middle-class Caucasians. These respondents were typically born on the U.S. mainland and had lived their entire lives in urban areas. They had married at the age of 21 or 22 and were 29 years old at the time of the interview. In their eight years of marriage they had had

two children. They were typically well educated, with an average educational attainment of two years of college, and they had an average family income of over $15,000. The husbands were mainly professionals and the 43 percent of wives who were employed worked principally in clerical jobs. Respondents in this group were likely to be either Catholic or Protestant.

Urban middle-class Japanese. These respondents differed little from their Caucasian counterparts with respect to most background characteristics (education, occupation, income, wife's employment status, duration of marriage, and parity). They had also typically spent their whole lives in the city but, unlike the Caucasians, most of them were born on Oahu. Although they had been married about as long as the Caucasians, they tended to marry later, at the age of 24 on the average. Most urban middle-class Japanese respondents were either Buddhists or Protestants.

Urban lower-class Caucasians. Respondents in this group were typically born on Oahu or on the U.S. mainland and had always lived in urban areas. They had married very early, at age 20 on the average, and by the age of 28 had two or three children. After graduating from high school, the husbands became craftsmen or, less often, professionals or service workers. The wives normally took jobs as secretaries after marrying but later left their jobs to take care of their children. Average family income was slightly more than $9,000, considerably below the median income for all families on Oahu. The majority of respondents in this subgroup were Catholic.

Urban lower-class Japanese. Composed mainly of Buddhists and Protestants, this group was better educated and economically better off than the other lower-class groups. Those wives who held jobs were usually secretaries, and husbands tended to be employed in the crafts. They had only two children, on the average, in spite of a relatively early age at marriage (21.4 years) and a relatively long duration of marriage. They were born on Oahu for the most part, and had more urban experience than any other group.

Urban lower-class Filipinos. These couples, most of whom were Catholic, had had two or three children in their seven years of marriage. Most respondents were born in the Philippines and a substantial number were born on farms, but a majority had nevertheless lived in urban

areas all their lives. They had less education than other lower-class respondents and ranked considerably lower on the occupational scale; most of the men were service workers or laborers. With nearly half of the women working, however, they were able to maintain their family incomes at the $10,000 level. In many instances, they were overeducated for the jobs they were doing. More than a few of those with high school and college education were employed in menial jobs as yardmen or hotel maids.

Rural Filipinos. The men in these families worked on the pineapple and sugar cane plantations of Oahu. Most of their wives had also done plantation work at some time since marriage, but only a quarter of them were still employed. The rest were at home taking care of the three or more children they had borne in 11 years of marriage. They were undereducated (having completed only seven years of schooling on the average) and underpaid (with less than $9,000 of total family income annually). They were virtually all Catholics, having been born in the Philippines, a Catholic country. Most were born in rural areas, and few had ever lived in a city.

3

positive and negative values of children

In this study the "values" of children are broadly conceived to include the psychological, economic, and social satisfactions and costs associated with having children, as perceived by parents. If couples who are able to exert some control over their childbearing behavior make conscious family-size decisions, then these values should be related to their family-size goals and fertility behavior. The relationships between the values associated with having children, family-size decisions, and fertility behavior will be reported in Chapter 6, but first it is necessary to explore parents' feelings about children, about the functions children serve, and about the disadvantages of having children.

Both open-ended and structured questions were used to elicit from respondents those advantages and disadvantages of children that were most important to them. After the fieldwork was completed, a detailed coding scheme was developed to encompass the many advantages and disadvantages mentioned by respondents in Hawaii and the other countries in the project. The data were content analyzed by means of a scheme that contains 49 specific advantages under nine major categories and 25 specific disadvantages under eight major categories as shown in Exhibit 3.A.

Advantages of having children

Open-ended questions were asked early in the interview to tap the most salient values of children. Parents were asked what they consid-

Exhibit 3.A Major code categories and specific code categories used in the content analysis of responses: advantages and disadvantages of having children

ADVANTAGES

Happiness, love, companionship

Companionship, avoidance of loneliness
Love, affection
Play, fun with children; avoidance of boredom
Relief from strain, distraction from problems
Happiness for individual parent (general)
Happiness for family
Uniqueness, specialness in parent-child relationship

Personal development of parent

Character development, responsibility, maturity, morality
Incentives to succeed, striving to provide for children
Fulfillment of self, completeness as person
Extension of self
Learning from experience of childrearing
Motherhood, fatherhood; adulthood
Proof of fertility, masculinity, femininity

Childrearing satisfactions

Pride in children's accomplishment
Pleasure from growth, development of children
Children to carry out parent's hopes, aspirations
Opportunity to teach, guide, instill values
Satisfaction in one's childrearing ability, accomplishment
Satisfaction in providing for children

Economic benefits, security

Economic help in old age
Companionship, comfort, care in old age
Unspecified help in old age
Economic help (old age not mentioned)
Comfort, care (old age not mentioned)
Help in housework, family chores; practical help
Sharing financial responsibility; insurance, security
Help in family business, farm
Help in taking care of other children
Unspecified help (old age not mentioned)

Exhibit 3.A *(continued)*

Benefits to family unit

Children as bond between spouses
Children as reason for, fulfillment of marriage
Children as family life, complete or close-knit family

Kin group benefits

Continuity of family name
Continuity of family traditions
Enhancement of reputation of family
Having future grandchildren
Children as heirs, someone to inherit family wealth
Religious rituals, ancestor worship
To increase strength, power of kin group
To satisfy desires of spouse
To satisfy desires of other kin

Social, religious influences

Conformity to social norms
Conformity to religious norms
Children as benefits to society

General, intrinsic value of children

Children as treasure, wealth, assets
Instinctive, natural to have children
General wanting, liking children

Other advantages

DISADVANTAGES

Financial costs

Educational costs
General financial costs

Emotional costs

Responsibility of parenthood
Discipline, moral behavior
Health problems of children
Concern over children's future success, happiness
Concern about satisfying children's present wants
Noise, disorder, nuisance
General rearing problems
General emotional strain

Exhibit 3.A *(continued)*

Physical demands on parents

Health hazard of pregnancy; maternal health
Physical work, tiredness caused by children

Restrictions on alternative activities

Restrictions on time
Restrictions on travel
Restrictions on social life, recreation
Restrictions on job, career
Restrictions on personal wants
Restrictions on privacy
General lack of flexibility, freedom

Marital problems

Less time, interaction between spouses
Disagreements over children
General marital problems

Kin group costs, problems of inheritance

Disadvantages relating to, affecting kin group

Societal costs, overpopulation

Disadvantages relating to, affecting society; concern about overpopulation

Other disadvantages

ered to be the good things or advantages of having children, compared with not having children at all. Initial answers tended to be rather vague (e.g., "I just like children," "I've always wanted to have children," or "Children make me happy"), but interviewers were trained to use nondirective probes to draw out more concrete responses. They would ask, for example, "What is it that you like about children?", "Why have you always wanted children?", or "Why do children make you happy?" Although most respondents were eventually able to distinguish three or four different advantages of having children, it was clear that many of them had not organized their thoughts about children in this way before. Even for them, however, unconsciously held values may have influenced childbearing decisions.

The percentage of respondents mentioning major advantage categories is shown in Table 3.1. More than three-fourths of the respon-

Table 3.1 General advantages of having children

(Percentage of respondents who mentioned at least one advantage under each of specified major code categories, by socioeconomic and ethnic group and by sex)

Major code category	Urban middle		Urban low			Rural			All respondents
	Caucasian	Japanese	Caucasian	Japanese	Filipino	Filipino	Female	Male	
Happiness, love, companionship	73	74	66	84	86	90	82	76	79
Personal development of parent	66	48	54	55	22	19	45	44	44
Economic benefits, security	14	15	13	22	76	96	37	39	38
Childrearing satisfactions	61	47	55	43	13	5	37	39	38
Benefits to family unit	40	51	34	33	20	6	33	32	32
Kin group benefits	23	21	17	18	21	12	15	22	19
General, intrinsic value of children	15	17	18	17	3	4	15	10	13
Social, religious influences	8	4	1	1	0	0	2	3	3
Other advantages	5	7	5	1	2	0	4	2	3

dents spontaneously mentioned various emotional satisfactions of children (mainly companionship, fun, and happiness that children provide), which are included under the heading "happiness, love, companionship." Although they accorded it considerably less importance, nearly half of the respondents mentioned the contribution of children to their own personal development. They saw children as a factor in helping them to "settle down" and become more mature, responsible adults, for instance. Children were also viewed as providing a learning experience for their parents or as an incentive to succeed in life.

Although children are considered an economic benefit to parents mainly in developing countries, economic factors still appear to exert some influence in Hawaii, particularly among Filipinos. It should be stressed, however, that strictly financial considerations were not necessarily paramount to our respondents. When they talked about security, they often referred to emotional and protective security (comfort and care, particularly in old age) rather than to purely economic security. Under the general rubric of economic benefits, practical kinds of help ranked highest, but other data indicated that the benefit obtained from children's help with housework and chores was rarely considered to be a very important advantage of having children. Practical help appeared more as a useful by-product of children than as a reason for having them.

The satisfactions parents derived from rearing children were also mentioned often, particularly by Caucasian and Japanese respondents. The principal satisfaction came from watching children grow and develop. Parents said they also took pleasure in the opportunity to teach and guide their children and to bring them up the way they wanted.

All of the advantages described so far accrue basically to the individual parent rather than to the family unit or society in general. In fact, the broader the reference group, the fewer were the advantages mentioned for that group. Benefits to the individual parent predominated; benefits to the family unit were substantially less important, followed by benefits to the kin group, and finally societal and religious benefits.

Approximately one-third of respondents in Hawaii mentioned advantages to the family unit. Many of them expressed the view that there is no family life without children and that children are necessary for a complete family. Children were also thought to create a stronger bond between husband and wife and, in some instances, to help hold a marriage together.

Benefits to the kin group (including having children to carry on the

family name and traditions) were mentioned by only one-fifth of the respondents. Even fewer respondents mentioned a general or intrinsic value of children. Least salient were advantages of children to society or religion.

Thus, in general, children were most valued by Hawaii parents for the emotional satisfactions they bring, for their role in helping parents develop personally, for the practical benefits and security they provide, for the satisfactions to parents inherent in childrearing, and for the contribution of children to the family unit. External pressures from relatives, society, and religion were generally less salient to parents in the Hawaii sample.

The detailed categories into which responses were coded are less abstract than the major code categories and closer to the actual wording used by respondents. The most frequently mentioned coded responses are presented in Table 3.2. The three most frequently mentioned specific categories—companionship; happiness; and play, fun with children—all come under the major heading of emotional satisfactions from children. Love and affection, feelings often associated with children, appear lower on the list of advantages, though it is possible that respondents considered companionship to include these values. Other advantages expressed by at least 20 percent of respondents are pleasure from growth and development of children (which is the category mentioned most frequently by Caucasian respondents) and children as family life.

The great diversity of advantages of children perceived by parents in Hawaii is striking. Evidently children serve many different functions and provide a multitude of satisfactions to their parents. Since some of the advantages may be less important than others to parents, an attempt was made to determine the most important advantages by having respondents rank the advantages that were most and second most important to them. Results for items ranked first in importance are shown in Table 3.3. Happiness for the parent was the single most important advantage mentioned, largely because of the importance of this value among Filipino respondents. Throughout the distribution, there is a fair amount of overlap between advantages that were mentioned most frequently and those that were ranked as most important, but some differences are evident. Help with housework and family chores was mentioned by 18 percent of respondents (Table 3.2), but fewer than 1 percent rated this advantage as the most important benefit of children. Other frequently mentioned advantages that proved to be relatively weaker in importance to the sample as a whole include

companionship and play, fun with children. On the other hand, family life created by children and the love and affection they give grew in importance. Once again, no single benefit from children appears to dominate. Children have different values for different people, and the importance attached to those values also varies.

Ethnic and socioeconomic differences. The pattern of responses for the total sample masks substantial differences in the value of children as perceived by couples in different ethnic and SES groups. Analysis of the advantages of children by ethnic group reveals that Japanese and Caucasians shared somewhat similar feelings about children whereas Filipinos exhibited a strikingly different profile from either of those groups. Rural Filipinos deviated most strikingly from the average pattern. In urban areas, differences among lower-class and middle-class Caucasians and Japanese were moderate compared with differences between them and lower-class Filipinos. Evidently culture can have a considerable influence on the satisfactions associated with having children.

The most substantial differences are found in the degree of emphasis placed on economic benefits of children. Only 15 percent of Caucasians and Japanese spontaneously mentioned economic benefits, compared with 76 percent of urban lower-class Filipinos and 96 percent of rural Filipinos. These differences are further validated by responses to another item in the questionnaire, which revealed that 99 percent of rural Filipinos and 76 percent of urban lower-class Filipinos expected to receive economic assistance from their children in old age, whereas a large majority of Caucasians and Japanese did not expect any such economic help in old age.

The emotional benefits of children, particularly the happiness derived from them, were also more salient to the Filipino group. Rural Filipinos expressed a strong desire for companionship from children, whereas Caucasians were least likely of the three ethnic groups to see companionship as an advantage of having children.

On the other hand, relatively few Filipino couples mentioned the benefits of rearing children, personal development of the parent, or children's contribution to the family unit. For example, not a single rural Filipino respondent and fewer than 5 percent of urban lower-class Filipinos mentioned any of the following advantage categories: pleasure from growth and development of children, learning from the experience of childrearing, and the opportunity to teach and guide children. Caucasians were most likely to mention these benefits of

Table 3.2 Specific advantages of having children
(Percentage of respondents who mentioned specified advantages, by socioeconomic and ethnic group and by sex

Advantage	Urban middle		Urban low			Rural			All respondents
	Caucasian	Japanese	Caucasian	Japanese	Filipino	Filipino	Female	Male	
Companionship, avoidance of loneliness	24	37	28	45	28	64	43	30	37
Happiness for individual parent (general)	21	20	18	19	45	63	34	29	32
Play, fun with children; avoidance of boredom	23	32	28	43	16	6	24	23	24
Pleasure from growth, development of children	39	28	40	28	4	0	23	22	22
Children as family life, complete or close-knit family	25	30	21	25	9	4	22	18	20
Help in housework, family chores, practical help	3	2	3	1	38	66	17	18	18

Character development, responsibility, maturity, morality	25	18	15	24	9	1	16	17	16
Learning from experience of childrearing	29	25	22	19	4	0	18	13	15
Children as bond between spouses	15	18	21	12	11	1	13	14	14
Love, affection	31	10	17	7	4	7	14	11	13
Companionship, comfort, care in old age	3	6	1	8	27	31	14	10	12
Incentives to succeed, striving to provide for children	11	8	15	16	10	14	8	16	12
Continuity of family name	11	9	8	11	15	7	6	17	11
Opportunity to teach, guide, instill values	23	9	15	11	3	0	9	12	10
Unspecified help in old age	2	1	1	1	16	42	8	13	10

Table 3.3 Most important advantages of having children

(Percentage of respondents who ranked specified advantages first in importance, by socio-economic and ethnic group and by sex)

Advantage	Urban middle		Urban low			Rural			All respondents
	Caucasian	Japanese	Caucasian	Japanese	Filipino	Filipino	Female	Male	
Happiness for individual parent (general)	7	6	5	4	34	18	12	15	14
Children as family life, complete or close knit family	7	9	8	13	3	2	8	7	8
Pleasure from growth, development of children	11	10	12	11	1	0	8	5	7
Love, affection	16	4	12	4	1	4	8	5	7
Companionship, avoidance of loneliness	7	6	7	12	2	0	7	4	6
Happiness for family	1	3	1	3	21	1	5	5	5
Play, fun with children, avoidance of boredom	3	5	8	5	2	2	5	4	5
Children as bond between spouses	3	7	8	5	5	0	5	5	5
Character development, responsibility, maturity, morality	3	8	6	8	1	0	4	4	4
Companionship, comfort, care in old age	1	1	0	1	7	15	3	5	4

children, while Japanese were ranged somewhere between but generally closer to the Caucasians than to the Filipinos. Other individual advantages that Filipinos mentioned less frequently than the other two groups were character development; play, fun with children; and children as family life. The greater degree of extended family patterns among the Filipinos may account for their relatively low frequency of responses mentioning children as necessary for family life, since Filipinos are able to include relatives and the children of relatives in their family life. In a study of Filipinos in Hawaii, Rosario (n.d.) has reported that close-knit extended family groups include third or fourth cousins and uncles even when these family members do not live in the same area.

A danger in interpreting ethnic and SES differentials in responses to open-ended questions is that groups may differ in their ability to verbalize feelings. As a rule, respondents with lower educational attainment seem to have a more difficult time expressing their perceptions and beliefs. Analysis of the structured questions in a later section will help to sort out which differences are real and which may be attributed to such extraneous factors. The relatively high level of education for our sample (an average of 11.7 years of schooling) should minimize this problem except in the case of the agricultural population, which has a mean level of educational attainment of only seven years.

Differences between husbands and wives. A majority of demographic surveys conducted in the past have relied on female respondents for most data. Many factors are responsible for this focus, including the relative ease of finding women at home and available for an interview, and financial constraints on researchers. Nevertheless, there are sound theoretical reasons to expect differences between husbands and wives in their attitudes toward children and childrearing. Both husbands and wives were therefore interviewed in the VOC survey so that sex differences could be explored. In this report we will examine the aggregate differences between husbands and wives, treating them as independent groups. A later report (Norris, 1975) will analyze differences and similarities between husbands and wives at the couple level.

From Tables 3.1–3.3 we see that, somewhat surprisingly, female and male respondents in Hawaii revealed very similar values of children. Substantial differences in their responses can be found for only a few categories. Women mentioned the emotional benefits from children somewhat more than their male counterparts, particularly the companionship that children afford. Companionship was understand-

ably more important to the wives since fewer than half of them were employed outside the home and since women are statistically likely to outlive their husbands by several years (and hence to need companionship when they are old).

Husbands scored substantially higher than wives on only two advantage categories—continuity of family name and incentives to succeed (Table 3.2). Continuing the family name is likely to be more important to husbands because it is their family name rather than the wife's that is normally given to the children. Striving to succeed in order to provide for children was naturally more important to husbands since most of them were the major breadwinner for the family. (Most wives who worked outside the home earned considerably lower salaries than their husbands.)

Disadvantages of having children

Although all of our respondents had chosen to have children, most of them were nevertheless able to cite substantial disadvantages entailed in childbearing and childrearing. There seems in fact to be a good deal of ambivalence in people's minds about the value of children. Responses emphasizing the disadvantages of children were less numerous and less diverse than those emphasizing the advantages, but respondents were still able to perceive an average of 2.7 distinct disadvantages. Only 8 percent of the Hawaii sample could think of no negative aspects of having children.

Most disadvantages can be subsumed under three major categories: restrictions on alternative activities, the emotional burden of children, and the financial burden (Table 3.4). Almost two-thirds of all respondents said that children imposed undesirable restrictions on their lives and activities. Most often these restrictions were expressed as a general lack of flexibility or freedom or a loss of spontaneity. Many respondents used the same wording, saying that children "tie you down." Mentioned most often were such specific restrictions as limitations in one's job or career, restrictions on social life, lack of time, inability to satisfy personal wants, restrictions on travel, and, to a lesser extent, lack of privacy. Some respondents said they wished they could be part-time parents so that they could enjoy most of the benefits of having children without having their freedom impaired or having the constant responsibility of looking after their children.

Emotional factors, which provide strong motivations for having children, also appeared high on the list of disadvantages of children. Respondents complained that children are hard to rear nowadays and

Table 3.4 General disadvantages of having children

(Percentage of respondents who mentioned at least one disadvantage under each of specified major code categories, by socioeconomic and ethnic group and by sex)

Major code category	Urban middle		Urban low			Rural			All respondents
	Caucasian	Japanese	Caucasian	Japanese	Filipino	Filipino	Female	Male	
Restrictions on alternative activities	79	70	63	82	50	57	67	62	65
Emotional costs	66	50	51	45	74	82	63	59	61
Financial costs	49	31	43	42	68	90	50	54	52
Physical demands on parents	12	12	3	16	23	30	19	12	16
Marital problems	15	7	8	9	1	0	9	3	7
Societal costs, overpopulation	1	0	2	4	0	2	2	1	1
Kin group costs, problems of inheritance	0	1	0	3	0	0	1	0	1
Other disadvantages	5	5	6	3	3	1	4	3	4

that they are difficult to discipline properly. Some respondents expressed the fear that their children would become drug users or "go wrong" in some other way. Many parents felt that children were a constant emotional strain, and the parents' anxiety was further compounded when their children became ill. They also tended to be disturbed by the noise and disorder children create.

More than half of all parents expressed concern over the financial cost of raising children and giving them a good education. Although responses to structured questions during the interview revealed that couples did not have an accurate notion of the actual dollar cost of raising children, still they evinced a strong belief that the expense of raising children was a disadvantage of having them. As might be expected, the economic burden was felt most strongly by those with large families and limited resources.

Related to the emotional burden of children are their physical demands on the parents. Sixteen percent of the respondents spontaneously mentioned the physical strain of raising children. About 7 percent said that children bring about marital problems by reducing the opportunity for parents to be together or by causing disagreements between husband and wife.

As with the advantages, costs relating to the kin group or to society as a whole were not salient to parents. In response to a structured question, 52 percent said that overpopulation was an important reason for not wanting another child, yet this reason seems not to have been too salient because only six respondents spontaneously mentioned overpopulation as a disadvantage of having children. Perhaps overpopulation was associated not with having children per se but with having a large number of children per family. It is also possible that respondents gave what they thought was a socially desirable answer when asked the structured question, or did not think of overpopulation as a cost of children until the idea was suggested to them.

Of the more detailed disadvantage categories, shown in Table 3.5, two dominate the rest, namely financial burden and general lack of flexibility and freedom. About half of the respondents mentioned one or both of these disadvantages. Various emotional problems connected with childrearing take up the next four positions on the list, and these are followed in frequency of mention by the physical burden of childrearing, noise and related disturbances, restrictions on job, and restrictions on social life.

As with advantages, respondents were asked to rank the importance of the disadvantages they had mentioned. In general the most fre-

Table 3.5 Specific disadvantages of having children
(Percentage of respondents who mentioned disadvantages, by socioeconomic and ethnic group and by sex)

Disadvantage	Urban middle		Urban low			Rural			All respondents
	Caucasian	Japanese	Caucasian	Japanese	Filipino	Filipino	Female	Male	
General financial costs	49	31	37	36	65	90	47	54	50
General lack of flexibility, freedom	64	46	49	61	40	33	50	47	49
General rearing problems	22	14	14	13	33	21	21	20	21
Discipline, moral behavior	13	11	17	16	30	31	20	19	20
General emotional strain	24	21	9	11	16	17	19	14	17
Health problems of children	12	8	15	7	7	57	16	14	15
Physical work, tiredness caused by children	12	12	2	13	21	30	17	11	15
Noise, disorder, nuisance	6	5	8	5	23	8	7	12	10
Restrictions on job, career	14	7	8	21	1	4	12	5	9
Restrictions on social life, recreation	7	18	6	16	3	2	7	10	8

quently mentioned disadvantages tended to be rated the most important as well (Table 3.6). Only minor inconsistencies between Tables 3.5 and 3.6 are evident, with the financial burden gaining in importance relative to the other categories and emotional and physical burdens receiving somewhat less importance. The primary costs of having children as perceived by respondents in Hawaii were still the financial costs, restrictions on flexibility and freedom, and a variety of emotional costs.

Ethnic and socioeconomic differences. Filipino respondents' views about the disadvantages of children were very different from those of the other two ethnic groups. Ethnic differences between Caucasians and Japanese, and SES differences among non-Filipino respondents, were somewhat erratic, however.

Filipino parents were particularly burdened by the financial, emotional, and even physical demands of childrearing, yet they were less concerned over the restrictions placed on them by children or by marital problems that children may create. Rural Filipinos were particularly sensitive to the financial and emotional costs of children. Ninety percent of this group spontaneously mentioned the high cost of bringing up children and 81 percent stated that financial costs were the single most important disadvantage of children. Emotional costs were mentioned by 82 percent of the rural Filipinos but were considered by many to be of minor importance, perhaps more of an inconvenience than a real burden.

There is no consistent pattern of differences in the disadvantages cited by Caucasians and Japanese. Nor are the distinctions between middle-class and lower-class respondents very sharp when the Filipino respondents are removed. Lower-class Caucasians and Japanese saw financial costs and rearing problems as more important than did their middle-class counterparts (Table 3.6), but middle-class respondents felt the emotional strain more strongly (Table 3.4).

Differences between husbands and wives. As with the advantages of having children, husbands and wives expressed very similar feelings about the costs of having children. Overall, women mentioned slightly more disadvantages than men. Women were more concerned about the physical and emotional burdens of childrearing[1] and with the inter-

1 This finding is consistent with the results of a survey on mental health in the United States, which reported that children are a greater source of distress to women than to men. See Guvin, Veroff, and Feld (1960).

Table 3.6 Most important disadvantages of having children

(Percentage of respondents who ranked specified disadvantages first in importance, by socio-economic and ethnic group and by sex)

Disadvantage	Urban middle		Urban low			Rural			All respondents
	Caucasian	Japanese	Caucasian	Japanese	Filipino	Filipino	Female	Male	
General financial costs	14	7	17	20	28	81	26	26	26
General lack of flexibility, freedom	24	19	12	26	17	1	14	20	17
General rearing problems	6	3	11	7	9	4	7	6	7
Discipline, moral behavior	6	5	6	7	9	0	7	5	6
General emotional strain	2	10	2	4	4	1	4	4	4
Responsibility of parenthood	4	4	4	0	3	0	4	2	3
Health problems of children	5	2	6	0	2	4	4	2	3
Restrictions on time	3	7	1	5	1	0	3	3	3
Physical work, tiredness caused by children	2	1	0	3	5	2	3	2	2
Restrictions on job, career	6	2	0	5	0	0	4	1	2

ference of childrearing with employment or their careers. Their greater concern was to be expected since wives normally bear the major responsibility for bringing up children. Although only 12 percent of mothers spontaneously mentioned restrictions on their careers, there appears to have been some degree of conflict between the role of mother and that of worker. In fact, in response to a structured item, 93 percent of those wives who were not currently employed said that an important reason for not working was that they had to take care of their children.

Although some differences have been noted between husbands and wives in their perceptions of the advantages and disadvantages of children, even more striking is the congruence in their feelings about children. Our findings indicate that children serve very much the same functions for husbands and wives and they impose similar types of costs.

Perceived reasons why people in general want children

Couples may be influenced in their feelings about children by their perceptions of how other people in their neighborhood or community regard children. The community may hold certain norms about children, and an individual's perception of those norms may influence his or her orientation toward children. In an interview it is also possible that respondents will attribute to others feelings that they themselves have but are reluctant to admit. To explore these issues, we asked parents in Hawaii the following question: "In your opinion, what are the main reasons why people around here want children?" Responses were coded into the categories used for the advantages of having children, with a few categories added. The results are presented in Table 3.7.

The three most prevalent reasons mentioned were companionship (25 percent), happiness for the parents (21 percent), and the fact that others simply must like children (20 percent). The first two reasons parallel the advantages of children that were mentioned most often in the earlier open-ended question. The third reason given here did not appear often in the list of advantages of children largely because of the way the open-ended question was posed. Other frequently cited reasons include the realization of a full and complete family life, continuity of family name, an instinctive drive to have children, help in old age, love and affection, and the fulfillment of marriage.

Conspicuously missing from the list of reasons are certain areas of personal development, such as character development and learning from children; pleasure derived from playing with children and watch-

Table 3.7 Perceived reasons why people in general want children

(Percentage of respondents who mentioned specified reasons, by socioeconomic and ethnic group and by sex

Reason	Urban middle		Urban low			Rural			All respondents
	Caucasian	Japanese	Caucasian	Japanese	Filipino	Filipino	Female	Male	
Companionship, avoidance of loneliness	5	20	10	24	29	67	27	22	25
Happiness for individual parent (general)	7	10	7	9	49	42	22	21	21
General wanting, liking children	18	31	25	32	8	2	22	18	20
Children as family life, complete or close-knit family	13	21	16	15	6	1	14	11	12
Continuity of family name	18	9	8	25	10	6	11	13	12
Instinctive, natural to have children	17	9	13	17	5	2	10	12	11
Don't know	18	13	15	11	6	1	11	10	10
Unspecified help in old age	2	1	0	0	17	44	9	10	10
Love, affection	9	11	18	11	2	11	8	11	10
Children as reason for, fulfillment of marriage	3	13	3	8	17	2	7	11	9
Other people's reasons same as respondent's	15	10	10	13	0	1	9	7	8

ing them develop; and help with housework and chores. All of these factors figured more prominently in the advantages to respondents of having children, discussed previously. On the other hand, respondents attributed more to others than to themselves the reasons continuity of family name and the intrinsic value of children. Respondents tended to assign more rationality in childbearing decisions to themselves than to others in the community. Whereas our respondents had children for what they considered to be good, rational reasons, they saw others as more likely to have children because "everyone else does," "it's the thing to do," "they can't help themselves," or "they simply don't know any better." In spite of these differences, there is a fair amount of congruence between respondents' perceptions of the motivations others have for wanting children and the advantages that were salient to the respondents themselves. In fact, 8 percent said they thought other couples wanted children for the very same reasons that they wanted children.

Class and ethnic differences that emerge from this analysis are similar to those observed earlier. Filipinos, particularly in rural areas, saw others as wanting children for the companionship and happiness they provide and for their value in providing help with housework and security in old age—that is, they viewed the value attached to children by others as being instrumental. Caucasians and Japanese in urban areas, on the other hand, saw others as being concerned with the intrinsic value of children and children as necessary to complete the family. Wives and husbands had very similar perspectives on others' motivations for wanting children. Wives saw companionship and a general fondness for children as being a slightly more important factor, whereas husbands stressed the importance of fulfilling the marriage; but even these differences were not substantial.

Reasons for wanting daughters and sons

Not all children are valued equally. Parents may prefer children of a certain sex, for example. In many cultures a strong preference is expressed for male children. One purpose of the VOC Study in Hawaii was to find out why parents may desire children of a particular sex, to determine the extent of their sex preferences, and to see what implications their responses have for a differentiation of sex roles among their children.

Boy preference did not emerge very strongly in Hawaii when couples were asked about the sex composition of their ideal family. Only a slight preference for sons was evident (respondents wanted 1.8 sons,

on the average, compared with 1.5 daughters). But boy preference did show up consistently in a number of other contexts. Sixty-seven percent of respondents thought it was very important to have at least one boy among their children, whereas slightly fewer (58 percent) thought that having a girl was very important. The importance that some respondents attached to having a son can also be seen in the answers to the following question: "If you didn't have any sons and you kept having daughters what would you do? Would you continue having babies until you had a boy, or would you stop after a certain number of girls?" About half said they would stop after having two or three girls, but 23 percent said they would not stop trying to have a son until they had at least four daughters, and another 13 percent said they would continue until they had a boy no matter how many births it took.

The strongest indication of boy preference appears in the order in which parents wanted to have their children. When respondents were asked whether they would prefer to have a boy or a girl for their first child if they could have whichever they wanted, about half said that the sex would not matter. Among those who did state a sex preference, however, sons were preferred over daughters by a margin of more than three to one.

Respondents who said it was important to them to have at least one son or at least one daughter were asked why it was important. Their reasons are outlined in Table 3.8 for daughters and Table 3.9 for sons. Daughters were valued primarily for their contribution to housework (38 percent), although only Filipino respondents and to a smaller extent lower-class Japanese expressed this value strongly. Girls were also valued for the companionship they give their mothers (24 percent) and for a multitude of favorable personal qualities such as gentleness, cuteness, loyalty, and good manners (20 percent). Respondents evinced a strong feeling that the wife in particular benefited from girls. Boys were valued primarily because they carry on the family name (55 percent), and secondarily for companionship with their fathers (22 percent). They were desired much less for their intrinsic qualities. It is striking that even in a modern society like Hawaii such great stress was placed on continuity of the family name by people in every population subgroup studied.

Sons were valued somewhat, by Filipino respondents, for help with the housework, but not nearly to the same extent as daughters. Furthermore, boys were generally expected to perform very different types of chores, such as yardwork or taking out the garbage, rather than helping with cooking, cleaning, ironing, and other chores that

Table 3.8 Reasons for wanting girls
(Percentage of respondents who mentioned specified reasons, by socioeconomic and ethnic group and by sex)

Reason	Urban middle		Urban low			Rural			All respondents
	Caucasian	Japanese	Caucasian	Japanese	Filipino	Filipino	Female	Male	
Help in housework, family chores; practical help	8	11	13	27	66	90	35	41	38
Companionship, closeness with mother	31	30	28	21	4	18	27	20	24
Behavior, personality of girls (positive)	28	13	28	32	11	2	24	16	20
Parent's preferred sex ratio	16	13	18	11	9	0	4	14	9
Mixture of sexes for benefit of children	8	20	19	9	0	0	6	11	8
Unspecified help (old age not mentioned)	3	9	7	11	9	2	6	10	8
Play, fun with children; avoidance of boredom	9	8	11	6	9	0	8	2	5
Opportunity to teach, guide, instill values	16	4	7	3	9	0	7	4	5

Table 3.9 Reasons for wanting boys

(Percentage of respondents who mentioned specified reasons, by socioeconomic and ethnic group and by sex)

Reason	Urban middle		Urban low			Rural			All respondents
	Caucasian	Japanese	Caucasian	Japanese	Filipino	Filipino	Female	Male	
Continuity of family name	41	43	50	45	46	90	51	58	55
Companionship, closeness with father	36	31	30	19	9	4	26	17	22
Help in housework, family chores; practical help	2	1	3	2	26	31	8	10	9
Behavior, personality of boys (positive)	9	10	15	10	4	0	8	6	7
Parents' preferred sex ratio	13	9	7	7	2	0	6	6	6
To satisfy desires of spouse	10	4	8	10	2	1	10	0	5
Help in taking care of other children	4	1	12	2	6	0	4	5	4
Mixture of sexes for benefit of children	9	7	3	3	1	1	6	2	4

were expected of girls. Other reasons given by respondents for wanting boys and girls also indicated that children are socialized into sex roles. Several male respondents with young sons, for example, said they could not wait until their sons grew up so that they (the respondents) could play ball with them and take them to sporting events. Girls, on the other hand, were viewed as companions and helpmates for the mother. Even in cases where boys and girls were valued for the same reasons (e.g., because they could care for other children), the reasons were often expressed differently for the two sexes: girls "take care of" their siblings whereas boys "protect" their sisters.

Although it appears that these young married couples still favored traditional sex-role differentiation, when it came to education for their children they exhibited only slight discrimination in favor of boys. Seventy-seven percent expected their sons to go to college and 9 percent expected them to go on to graduate school. Comparable figures for daughters were 68 percent for college and 7 percent for graduate school. In general, it appears that parents wanted to foster feminine characteristics in their daughters and masculine characteristics in their sons, but beyond that they were willing to allow their daughters to compete in life on equal terms with their sons.

Most parents wanted to have at least one child of each sex. Such a desire for children of both sexes has been found to exist in a wide variety of important subgroups in the United States. (See, for example, D. Freedman, R. Freedman, and Whelpton, 1960.) In addition to preferring a mixture of boys and girls for themselves, respondents also felt that a combination of both sexes would benefit the children. Some parents said they wanted a mixture so that their children would learn how to interact with members of the opposite sex and even, as one mother put it, "so that daughters can find out how a boy looks and vice versa."

Ethnic and socioeconomic differences. Substantial ethnic and SES differences were apparent in reasons for wanting children of a particular sex. Although only 10 percent of middle-class parents valued daughters for their help with the housework, 20 percent of lower-class Caucasians and Japanese mentioned this reason for wanting daughters and a substantial majority of both Filipino groups mentioned it (66 percent of urban lower-class Filipinos and 90 percent of rural Filipinos). Rural Filipinos valued daughters almost exclusively for housework help and companionship for the mother. Urban lower-class Filipinos mentioned a number of other reasons for wanting girls, but help with

housework clearly predominated. There were few consistent differences among the urban middle-class and the urban lower-class Caucasians and Japanese. Japanese respondents of both classes valued daughters' housework help more highly than did the Caucasians, but they were less concerned with having daughters in order to teach and guide them.

Continuity of family name was a strong motivation for having boys among all ethnic and SES groups, but it was particularly salient to rural Filipinos. Filipinos were also the only respondents who gave much weight to practical help around the house as a reason for wanting boys. They were less likely than Caucasians and Japanese to mention reasons other than practical help or family name. Middle-class respondents emphasized companionship and the benefits of a particular sex ratio. As we have seen elsewhere, middle-class and lower-class Japanese and Caucasians in urban areas of Oahu exhibited rather similar patterns of response, whereas Filipinos in both urban and rural areas deviated substantially from those patterns.

Differences between husbands and wives. Male and female respondents differed more in their reasons for wanting children of a particular sex than they did in the advantages they associated with having children in general. Wives were more likely than husbands to think that daughters were for the mother and sons were for the father. Wives also placed more emphasis on desirable personal qualities of girls and on fun derived from playing with daughters. Continuity of family name and practical help were more salient to husbands than to their wives.[2] In spite of these differences, husbands and wives on the whole concurred on the two or three major reasons for wanting daughters or sons.

Attitudes toward children

General attitudes toward children were determined by means of a set of 45 Likert-type attitude items covering major aspects of having and raising children. The topics included in this set of items were based on an extensive search of the relevant literature and on responses to open-ended questions in pilot studies for the Value of Children project. While most of the salient positive and negative values of children that were spontaneously mentioned by respondents in the open-ended

2 Rainwater (1965) also found in his study of couples in three U.S. cities that more men than women were interested in having the family name carried on.

questions were at least nominally covered by the attitude items, there were some significant omissions. For example, the attitude items did not deal adequately with the pleasures of watching children grow and develop, the fun of playing with children, or the practical help children can provide. Nor did they give sufficient attention to problems in rearing and disciplining children or the anxieties that children cause. Most of the salient values were included, however.

The entire set of 45 attitude items is reproduced in Table 3.10, along with the mean value of responses to each item. Scores on each item range from 7 for strong agreement to 1 for strong disagreement, with 4 indicating neutrality. Only six response categories were offered to respondents (three levels of agreement and three of disagreement), but those who insisted they were neutral and those who gave no answer were assigned a neutral score of 4. The majority of items elicited general agreement, but 40 percent had mean scores below 4.

Many of the items that met with the greatest disagreement concern external controls over childbearing. In this context as elsewhere respondents were reluctant to admit that pressures from family, friends, or the community had any influence on their childbearing decisions. The items that elicited strongest agreement have to do with the satisfaction parents derive from the efforts they make on behalf of their children. One should not, however, make too much of the level of agreement or disagreement for individual attitude items, because the level of the mean score may be a function more of the strength of the wording of the question than of its substantive content. It is more instructive to look at clusters of similar items that comprise different dimensions of the value of children.

To investigate the underlying pattern of relationships among the attitude items, the entire array was factor analyzed. A set of six factors was extracted from the Hawaii data for the total sample; the varimax rotated factor structures are presented in Table 3.10. The first factor contains nearly half the attitude items (22 out of a total of 45 items). Although many of the items refer to matters of continuity and traditional attitudes toward children, the whole set is too amorphous to be easily interpretable. Therefore, all items with factor loadings of .50 or above on the first factor were themselves subjected to factor analysis. The results of the procedure are presented in Table 3.11.

The factor analysis of these 22 attitude items yielded five distinct factors. Because both varimax and oblimin rotations yielded the same pattern of items within factors, only the first solution is shown here. The first of the five subfactors has to do with the *naturalness of the*

parental role. It is "only natural" that men and women should want children. These items suggest an instinctive desire for children and they are related to the feeling of being needed that parents derive from children.

The second subfactor is based on the *continuity and security* that children provide. Children are the conduit for transmitting the family name and traditions to future generations. Respondents who scored high on this factor looked forward to help from their children in old age, and they even felt a sense of immortality since part of them would live on in their children.

The third subfactor is also concerned with roles, but in this case it is the *adult role* that is paramount. Children are seen as validating one's adult status. Until a person has children, he or she cannot truly be looked upon as an adult.

The fourth subfactor is the most difficult to interpret, but many of its elements have to do with the *satisfactions of parenthood.* Parents receive satisfaction from raising children and guiding their development. In return, the children provide companionship and loyalty to their parents.

The fifth and final subfactor within factor I concerns children as a source of *goals and incentives* to parents. Children are seen as binding the wife and husband together and as lending a clear purpose to their lives and work.

All of these clusters of items were derived from a larger set of correlated items included in factor I in Table 3.10. The remaining factors in that table seem manageable as they are and will be interpreted without further factoring. Factor II contains two basic concepts, *happiness and affection* and *external controls on childbearing.* On the one hand, children give parents a feeling of security that allows them to feel comfortable and happy in the family situation. On the other, children are regarded as an inevitable product of marriage. Respondents who felt most secure and happy by having children also tended to believe that having children was a duty. These respondents seemed to be the least resistant to external pressures to have children whether from their family and friends, society, or nature itself.

Factor III concerns a person's propensity to assess the alternatives to having children and might be labelled *decision-mindedness in childbearing.* All of the items in this factor have to do with a conscious weighing of children against the available alternatives and a willingness to recognize the effects children might have on the finances, careers, and lifestyle of the parents.

Table 3.10 Factor structure of 45 attitude items after varimax rotation

Item	Factor I	II	III	IV	V	VI	Communality	Mean
34 A man has a duty to have children to continue the family name	.73	.10	−.17	.06	.08	−.29	.67	4.4
7 It is important to have children so that the family traditions will live on	.73	.07	−.12	.11	.04	−.22	.61	5.0
18 Having children is the most important function of marriage	.73	.26	−.23	−.05	−.01	−.02	.65	5.0
15 One of the highest purposes in life is to have children	.71	.18	−.10	a	.03	.11	.57	5.4
42 Having children is a sign of blessing on a marriage	.68	.29	−.22	−.06	−.03	.14	.62	5.3
2 A good reason for having children is that they can help when parents are too old to work	.67	.08	−.24	.19	.07	−.26	.62	4.1
36 One of the best things about having children is that you are never lonely	.66	.16	−.09	.01	−.07	.10	.49	5.6
25 One of the best things about having children is the true loyalty they show to their parents	.66	.10	−.06	.14	.08	.13	.48	5.3
3 Raising children is an act of virtue	.64	.06	.04	.02	.03	−.14	.43	4.5
35 A person can feel that a part of him lives on after death if he has children	.61	−.04	−.05	.06	.03	.03	.38	5.5
33 One of the best things about being a parent is the chance to teach children what they should and should not do	.61	.10	−.03	.08	−.01	.11	.40	5.8
8 It is only natural that a man should want children	.59	.08	−.11	−.05	.15	.11	.40	5.3

14	Having children makes a stronger bond between husband and wife	.58	.10	.02	-.11	-.09	.14	.39	5.9
6	Having children gives a person a special incentive to succeed in life	.56	.04	.01	-.05	.01	.32	.42	6.0
29	Just the feeling a parent gets of being needed is enough to make having children worthwhile	.56	.07	-.11	-.01	.11	.33	.45	5.6
30	A person who has been a good parent can feel completely satisfied with his achievements in life	.53	.08	-.02	-.05	-.10	.40	.46	6.1
45	A boy becomes a man only after he is a father	.52	-.02	-.42	.08	.44	.02	.65	3.2
28	It is only natural that a woman should want children	.51	.10	-.13	-.04	.19	.25	.38	5.6
16	A girl becomes a woman only after she is a mother	.50	.08	-.39	.11	.37	.07	.56	3.7
17	It is the parents' fault if their children are not successful in life	.47	-.04	-.01	-.04	.35	-.14	.39	3.9
13	All the efforts a parent makes for his children are worthwhile in the long run	.46	-.03	.08	-.19	.01	.30	.34	6.3
22	After becoming a parent, a person is less likely to behave immorally	.38	-.11	-.24	.14	.38	.18	.41	3.7
43	The family with children is the only place in the modern world where a person can feel comfortable and happy	.22	.76	.10	-.03	.07	.10	.65	3.9
31	The family with children is the basis of all that is good in society	.14	.67	.32	-.11	.03	.12	.60	4.2
44	A person who has no children can never really be happy	.14	.66	-.05	-.03	.22	.05	.51	2.6

Table 3.10 *(continued)*

Item	Factor I	II	III	IV	V	VI	Communality	Mean
4 It is only with a child that a person can feel completely free to express his love and affection	.23	.57	.10	.03	−.01	−.07	.39	3.7
40 The really important things in life can be learned only from the experience of raising children	.09	.57	.04	.01	−.04	.33	.44	4.6
38 It isn't right for a couple to interfere with nature by deciding to limit the number of children they will have	.07	.57	−.18	.10	−.11	−.17	.41	2.3
24 For most people it is inevitable to have children	.01	.49	.37	−.04	.22	.03	.44	4.2
12 It is a person's duty to society to have children	.29	.47	.01	.04	.27	−.27	.45	2.2
11 Considering the pressures from family and friends, a person really doesn't have much choice about whether or not to have children	.13	.40	.20	.31	.16	−.31	.44	1.9
23 The first thing a couple should think about when deciding to have children is whether or not they can afford it	−.10	.19	.72	.01	−.08	.02	.57	5.0
9 A couple ought to think seriously about the inconveniences caused by children before they have any	−.24	.13	.68	.16	−.01	.02	.56	4.6
32 Before having a child a couple should consider whether they would rather use their money for something else	−.17	.01	.62	.16	.17	−.19	.50	3.0

41	Before having a child a couple should consider whether it would interfere with the wife's work or not	−.27	.09	.47	.30	.04	−.06	.40	3.2
10	Always having children around is a great mental strain	−.14	.14	.04	.67	.05	−.08	.50	2.7
1	Caring for children is a tedious and boring job	.01	.21	−.20	.61	−.17	−.23	.53	2.6
26	Having children causes many disagreements and problems between husband and wife	.07	−.12	.03	.58	.18	.07	.40	3.8
39	When you have children you have to give up a lot of other things that you enjoy	.21	−.06	.22	.57	.01	.03	.42	4.8
19	Children limit you in what you want to do and where you want to go	.06	−.20	.23	.55	.01	.26	.46	5.0
37	Raising children is a heavy financial burden for most people	.30	−.31	−.03	.46	.07	−.06	.41	4.8
5	Most married couples would be happier if they did not have any children	−.17	.19	.09	.41	.06	−.12	.26	1.8
21	A young couple is not fully accepted in the community until they have children	−.02	.38	.16	.15	.66	−.05	.64	2.2
27	A person with children is looked up to in the community more than a person without children	−.03	.45	.14	.13	.55	.05	.55	2.8
20	Life for most people would be pretty dull without children	.27	.08	−.15	−.02	.05	.58	.44	5.5
Eigenvalue		10.0	4.4	2.9	1.9	1.4	1.2	21.8	na

na—not applicable.

$|\alpha| < .005$.

Table 3.11 Factor structure of attitude items with loadings greater than .50 on Factor I after varimax rotation

Item	Subfactor I	II	III	IV	V	Communality
28 It is only natural that a woman should want children	.77	.14	.18	.25	.04	.71
8 It is only natural that a man should want children	.74	.27	.14	.02	.29	.72
29 Just the feeling a parent gets of being needed is enough to make having children worthwhile	.51	.20	.17	.47	.07	.56
34 A man has a duty to have children to continue the family name	.15	.76	.29	.10	.16	.72
7 It is important to have children so that the family traditions will live on	.28	.76	.18	α	.22	.73
2 A good reason for having children is that they can help when parents are too old to work	.13	.71	.34	.12	.09	.66
35 A person can feel that a part of him lives on after death if he has children	.18	.60	.04	.26	.09	.47
3 Raising children is an act of virtue	.02	.55	α	.38	.23	.50
25 One of the best things about having children is the true loyalty they show to their parents	.24	.47	.15	.46	.10	.53
18 Having children is the most important function of marriage	.29	.46	.34	.21	.43	.65
16 A girl becomes a woman only after she is a mother	.18	.19	.84	.15	.20	.84

45 A boy becomes a man only after he is a father	.17	.29	.83	.17	.06	.83
30 A person who has been a good parent can feel completely satisfied with his achievements in life	.12	.07	.17	.80	.14	.71
42 Having children is a sign of blessing on a marriage	.22	.40	.27	.50	.29	.61
36 One of the best things about having children is that you are never lonely	.20	.45	.13	.46	.22	.52
33 One of the best things about being a parent is the chance to teach children what they should and should not do	.38	.35	.05	.39	.18	.45
14 Having children makes a stronger bond between husband and wife	.08	.18	.17	.07	.86	.81
6 Having children gives a person a special incentive to succeed in life	.17	.16	α	.40	.59	.56
15 One of the highest purposes of life is to have children	.34	.37	.21	.31	.47	.62
Eigenvalue	8.2	1.2	1.0	0.9	0.8	12.3

$|\alpha| < .005$.

Factor IV encompasses many elements of the *costs of children.* Included here are the direct financial costs of having children, the physical and emotional strain of raising children, problems between husband and wife, and a variety of opportunity costs to parents.

Factor V consists of two items relating to *status in the community* that may be gained by having children. The factor loadings also show some evidence of the logical relationship between status in the community and status as an adult. Factor VI contains only a single item on the *dullness of life without children* and will not be discussed further.

The above factors are derived entirely from the Hawaii data on the total sample. Data on female and male respondents were also factor analyzed separately, and the resulting factor structures were quite similar. In addition, an attempt was made to find some meaningful groups of attitude items that tended to cluster in all six VOC countries. The starting point for this exercise was a factor analysis of the 45 attitude items for all 2,591 respondents in the six countries. The factors for the cross-national data were compared with factors derived from each country's data and a set of nine subscales of items that had a tendency to cluster in most or all countries was developed. Since these cross-national scales overlap to a very large extent with the six factors and five subfactors shown in Tables 3.10 and 3.11 for Hawaii, the content of each subscale will not be discussed individually. (See the comparative analysis in Arnold et al., 1975, for a fuller discussion of these subscales.) The nine subscales were constructed mainly for use in comparative analyses across countries, particularly for regression analyses, but since they are very close to the Hawaii-specific factor structures they can be used for comparisons within Hawaii as well.

Mean scores on the nine attitude subscales are shown in Table 3.12 and Figure 3.1. Looking first at husband-wife differences on these measures (Table 3.12), we can see that the attitudes of female and male respondents were strongly congruent. On only two of the nine subscales did women and men exhibit a significant difference. Men were more in agreement than women with items having to do with continuity, tradition, and security, largely because of their greater interest in continuing the family name and traditions. Women, on the other hand, appeared to be substantially more decision-minded than men. That is, women were more likely to regard childbearing in a decision context that took into account alternative uses of money and time.

As usual, differences among ethnic and SES groups were more

pronounced. On the first five subscales, all of which deal with the positive values of children, lower-class respondents always scored higher than middle-class respondents, and rural Filipino respondents had the highest score of all (except on subscale 4, happiness and affection). Within SES groups, Filipino respondents scored highest, followed in turn by Japanese and Caucasian respondents. On the last four subscales middle- and lower-class Japanese and Caucasian respondents rarely had significantly different scores, but Filipino respondents exhibited a unique pattern. Filipinos were decidedly less decision-minded about childbearing than were respondents in the other ethnic groups, and rural Filipinos seemed particularly unwilling to consider alternatives to childbearing. Nonetheless, the rural group were concerned about the high costs of raising children, since this group scored highest on subscale 8, costs of children.

An unusual pattern is evident for subscales 6 and 7, social status from children and external controls on childbearing, respectively. While urban lower-class Filipinos were significantly more concerned than other groups with the social status derived from having children and with external pressures to have children, rural Filipinos scored lower than any other group on these two measures. The rather erratic pattern of scores for the rural group indicates that a good deal of caution should be used in interpreting these results. Biases may be expected from two sources. First, there may exist an agreement bias that is culturally determined or perhaps specific to different social groups. Second, translation problems may have arisen in the interviews of rural respondents, where Ilocano was widely used. Such problems would explain the unexpected responses to some questions by persons in this group, while Filipino respondents in urban locations, who were interviewed almost exclusively in English, gave responses that were more consistent with other interview data.

In spite of the necessity of cautious interpretation, the results of factor analysis of the attitude items augment and confirm patterns of findings described elsewhere in this report. In particular the results add to the evidence that (a) men and women had broadly similar feelings about children, (b) Filipino respondents had the highest positive value of children on a number of different dimensions and were least likely to consider alternatives to having children, (c) middle-class respondents exhibited the lowest value of children on the positive value dimensions, and (d) substantial costs of children were perceived by all groups but were especially salient to Filipino respondents in rural areas.

Table 3.12 Mean values of nine subscales derived from 45 attitude items

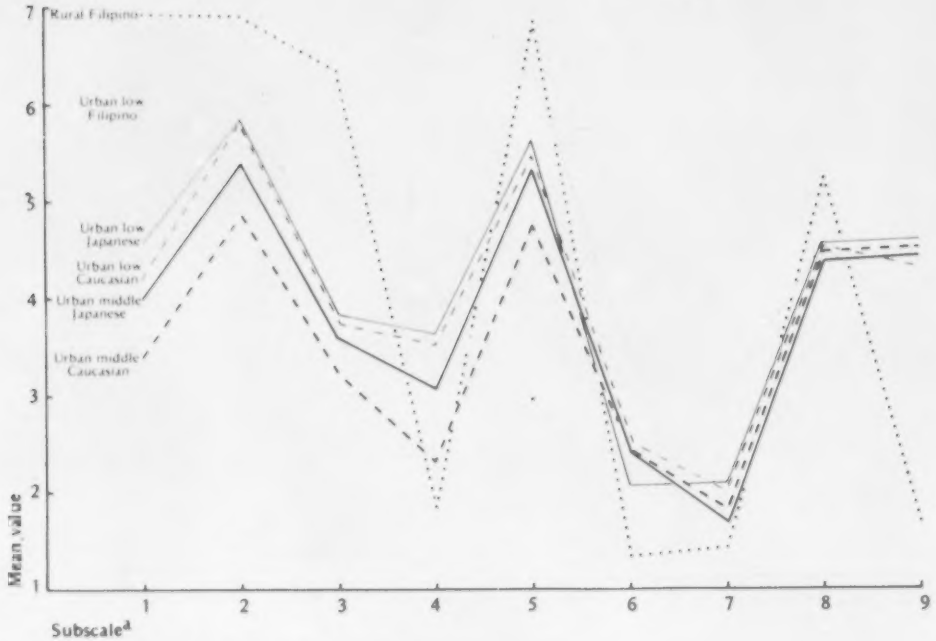
Subscale	Urban middle		Urban low			Rural				
	Caucasian	Japanese	Caucasian	Japanese	Filipino	Filipino	Significant difference[a]	Female[b]	Male[b]	All respondents
1 Continuity, tradition, security	3.43	3.99	4.20	4.57	5.98	6.91	.50	4.71	5.02	4.85
2 Parenthood satisfactions	4.87	5.38	5.81	5.83	6.29	6.90	.30	5.84	5.82	5.83
3 Role motivations	3.25	3.61	3.76	3.83	4.89	6.35	.40	4.24	4.36	4.30
4 Happiness, affection	2.36	3.09	3.53	3.64	5.07	1.86	.50	3.34	3.49	3.41
5 Goals, incentives from children	4.76	5.32	5.49	5.62	6.51	6.84	.32	5.71	5.87	5.78
6 Social status from children	2.46	2.44	2.53	2.07	3.40	1.34	.40	2.45	2.55	2.50
7 External controls on childbearing	1.86	1.71	2.02	2.11	3.02	1.46	.35	2.04	2.23	2.13
8 Costs of children	4.48	4.37	4.53	4.56	4.56	5.25	.40	4.64	4.54	4.59
9 Decision-mindedness in childbearing	4.53	4.45	4.32	4.62	3.76	1.72	.40	4.18	3.73	3.97

NOTE: For items in subscales, see Appendix C.

a Difference in mean between any two socioeconomic-ethnic groups greater than amount shown is significant at the .05 level.

b Difference in mean between female and male respondents greater than .30 is significant at the .05 level.

Figure 3.1 Dimensions of the value of children across socioeconomic and ethnic groups



a See Table 3.12 for subscale definitions.

Situation-specific reasons for wanting children

Some benefits of children may be enjoyed by having only one or two children, whereas other benefits are contingent upon a larger number of children. Similarly, one or two children entail certain kinds of costs, but other costs may not become operative until a larger family size is reached. For example, one child may impose a substantial loss of freedom on a couple, whereas additional children may not cause much more limitation of freedom. On the other hand, financial costs and emotional costs, such as noise and disorder, may not be much of a burden unless a larger number of children are present. Up to this point, only the general values of children as perceived by the Hawaii respondents have been discussed, without reference to the situation of the couples themselves. To determine the influence of situational factors on the value of children, respondents were questioned about their own family-size goals and why they did not want more or fewer children. Answers to the open-ended questions were coded into the same categories used before and the results appear in Tables 3.13–3.15. Respondents who wanted more children were asked why they did not want fewer (Table 3.13) or more (Table 3.14) than their desired number, whereas those who had decided not to have any more children were asked only why they did not want any more (Table 3.15).

Most of the reasons for not wanting fewer children were related to the belief that a smaller family would have an adverse effect on the children themselves. Two out of five respondents suggested that their children would not have adequate companionship if the couple reduced their family-size goal. Nineteen percent wanted to avoid having an only child and all the negative factors they associated with having an only child. Evidently a good deal of prejudice against the single-child family still exists; in fact, fewer than 2 percent of all respondents thought that one child would be ideal for them.[3]

Another reason given for not wanting fewer children was that a smaller number might result in an undesirable combination of sexes. Respondents often mentioned desiring a particular combination of boys and girls. They may have thought the desired sex composition would benefit themselves primarily, but they also considered it beneficial to the children, as discussed earlier. About one-third of the respondents begged the question by answering that their choice was simply "a good number to have."

3 Blake (1974) has found an overwhelming consensus among white Americans concerning the disadvantages experienced by an only child.

Table 3.13 Reasons for not wanting fewer than desired number of children
(Percentage of respondents who mentioned specified reasons)

Reason	Urban middle		Urban low			Rural			
	Caucasian	Japanese	Caucasian	Japanese	Filipino	Filipino	Female	Male	All respondents
Companionship for other children	49	47	38	59	22	25	44	36	40
Good number to have, want that number	15	55	22	21	41	50	31	35	33
To avoid an only child	28	18	24	32	11	4	19	18	19
Want a particular combination of boys and girls, balance	5	18	11	12	30	36	13	21	17

Table 3.14 Reasons for not wanting more than desired number of children
(Percentage of respondents who mentioned specified reasons)

Reason	Urban middle		Urban low			Rural			
	Caucasian	Japanese	Caucasian	Japanese	Filipino	Filipino	Female	Male	All respondents
Financial burden (general)	57	76	62	85	70	86	71	71	71
Desired number is correct number for rearing, ease of handling, happiness	44	39	46	32	54	61	47	39	43
Concern about overpopulation	36	8	13	18	6	0	12	14	13
General rearing problems	0	2	3	0	24	11	8	7	7

Table 3.15 Reasons for not wanting another child
(Percentage of respondents who mentioned specified reasons)

Reason	Urban middle		Urban low			Rural			
	Caucasian	Japanese	Caucasian	Japanese	Filipino	Filipino	Female	Male	All respondents
Financial burden (general)	52	68	56	61	62	73	60	64	62
Already have number wanted; enough boys, girls	42	45	44	39	47	54	47	41	44
Already have correct number of children for rearing, ease of handling, happiness	16	24	19	21	15	46	24	24	24
Concern about overpopulation	37	16	12	8	2	0	10	17	13

It should be noted that the pattern of responses to the situation-specific questions was quite different from the pattern for the general advantages of children. What emerged was a prevailing view that having some children entails a myriad of advantages for the parents, but having too few children is bad for the children themselves, rather than for the parents. On the other hand, large families were seen as being deleterious to the children in some ways. In another part of the interview, respondents were asked to give profiles of children brought up in large and small families. The interviewer would mention several characteristics of children and ask respondents whether each characteristic applied to a child from a large or a small family. Children from large families were thought to be more popular with other children, more open and loving toward other people, somewhat happier and far less spoiled than children from smaller families. But it was felt that children from small families had closer relationships with their parents and that they often possessed higher intellectual ability than children from large families. Thus, large families were seen as being good for children in some ways but detrimental to them in others.

Large families were also seen as entailing substantial costs to the parents (Table 3.14). When respondents who wanted more children than they already had were asked why they would not want more than their desired number, nearly three-fourths spontaneously mentioned financial considerations. Even in the middle-class group, a majority cited the financial burden as a reason for not having more children than they wanted. Forty-three percent of all respondents said that their chosen size was just the right number for rearing, ease of handling, or happiness, but they usually did not specify why. Smaller percentages mentioned the problem of overpopulation and general rearing problems. Middle-class Caucasians professed the most concern about overpopulation, while lower-class Filipinos showed the most concern about rearing problems.

The pattern of responses for those who did not want any more children was quite similar (Table 3.15). Once again, economic factors predominated, rather vague answers about the "right number to have" were also prevalent, and concern about overpopulation was important to some respondents. The most salient considerations were those relating to the parents and society, rather than to the welfare of the children. In short, parents in our sample did not want to have too few children for the sake of the children, but they did not want to have too many because of the adverse effects on themselves and, to a lesser extent, on society as a whole.

Reasons for wanting and not wanting another child

Another set of situation-specific questions administered to respondents dealt with reasons for wanting or not wanting an additional child, given the parents' present parity and family circumstances. All respondents, whether they wanted more children or not, were given a structured set of 17 possible reasons for wanting another child and nine possible reasons for not wanting another child. They were asked how important each reason was to them in deciding whether to have another child or not. Tables 3.16 and 3.17 show the percentage of all respondents who considered each reason to be very important.

More than two-thirds of respondents said that love and sharing were very important reasons for wanting another child and more than half thought that the learning experience and fun derived from children were very important reasons. Predictably, outside influences from relatives and religion were rated least important and economic factors as of little relevance except to the Filipino group. Women were more likely to say they wanted another child because they enjoyed having a small baby and because they liked to care for and raise children, among other reasons, whereas men gave more importance to continuing the family name and wanting more boys. Husband-wife differences were relatively minor, however, whereas class and ethnic differences were more pronounced.

Reasons for not wanting another child appear to have been considerably weaker (Table 3.17). Although 33 percent of respondents, on the average, thought that the reasons for wanting another child were very important, only 16 percent rated the average reason for not wanting another child as very important. Thus either motives for curtailing fertility were not so compelling as motives for continuing, or else our list of structured reasons for not wanting another child inadvertently left out some important motives for controlling fertility. The latter explanation seems improbable because the most salient disadvantages of having children revealed in the open-ended questions are all reflected in these structured items.

As usual, the financial burden of having children constituted the strongest reason for not wanting any more children, with 33 percent of the respondents ranking it as very important. Twenty-five percent said that an important reason for not wanting another child was that the amount of attention they could give to existing children would suffer. The spouse's desire to stop having children was considered very important by 20 percent of respondents and 18 percent said that overpopulation was a very important consideration. All other reasons–

Table 3.16 Most important reasons for wanting another child
(Percentage of respondents who rated specified reasons as very important)

Reason	Urban middle		Urban low			Rural			
	Caucasian	Japanese	Caucasian	Japanese	Filipino	Filipino	Female	Male	All respondents
To have special feeling of love between parent and child	57	59	71	67	68	98	71	68	70
To share what I have and know with children	60	56	63	63	69	93	68	65	67
Raising children helps me learn about life and myself	45	47	59	57	52	92	62	55	59
Fun to have children around the house	34	42	43	50	53	87	54	47	50
Enjoy caring for, raising children	34	35	42	43	33	75	48	38	43
To provide a companion for my children	26	41	24	41	55	52	41	41	41
To help carry on family name, traditions	13	12	25	18	64	92	35	43	39
Enjoy having a small baby	21	17	33	16	43	37	34	25	30
Want a boy/another boy	17	9	23	9	44	67	25	31	28

Table 3.16 *(continued)*

Reason	Urban middle		Urban low			Rural			
	Caucasian	Japanese	Caucasian	Japanese	Filipino	Filipino	Female	Male	All respondents
Spouse wants more children	18	25	25	18	35	31	29	24	26
To have enough children survive to adulthood	12	17	25	22	36	43	29	22	26
To have a child to help me in my old age	0	6	10	4	54	77	26	24	25
Want a girl/another girl	4	12	15	17	37	44	23	22	22
To have one more person to help family economically	1	1	5	1	37	76	18	21	19
To make my marriage stronger	3	5	5	5	42	5	12	14	13
My religious duty to have children	3	2	3	1	16	11	9	6	7
Relatives feel I should have more children	3	6	1	3	9	0	3	0	2

Table 3.17 Most important reasons for not wanting another child
(Percentage of respondents who rated specified reasons as very important)

Reason	Urban middle		Urban low			Rural			
	Caucasian	Japanese	Caucasian	Japanese	Filipino	Filipino	Female	Male	All respondents
Financial burden to family	21	16	31	32	40	57	34	31	33
Would not be able to give enough care, attention to other children	15	22	10	20	27	63	29	19	25
Spouse does not want more	22	15	15	20	21	32	18	23	20
Concern about overpopulation	27	13	17	20	22	1	20	15	18
Would be emotional strain for me	7	9	17	9	15	2	14	6	10
Would cause problems, strains between me and spouse	11	11	14	11	11	4	12	8	10
Could not spend as much time with spouse	16	8	8	11	15	2	10	9	10
Would restrict my freedom to do other things I enjoy	12	11	7	7	14	4	11	7	9
Would be a lot of work, bother for me	5	8	6	5	15	6	9	6	8

including the work involved, restrictions on freedom, adverse effects on the husband-wife relationship, and the emotional strain of having another child—were rated very important by 10 percent or less of respondents. The distinction between the costs of having children in general and the costs of having a certain number of children is highlighted by these results. For example, restrictions on freedom and flexibility were given as the second most important disadvantage of having children, but such restrictions were of little importance in the decision to have another child. This is quite reasonable because, as we have already observed, the first child is likely to place the greatest limitations on a couple's freedom, while the marginal effect of additional children is relatively small.

4

economic benefits and costs of children

Several economic theories have attempted to explain the demographic transition from high to low fertility at least partly as an adjustment to the changing economic function of children (Leibenstein, 1957; Robinson and Horlacher, 1971). These theories suggest that as countries modernize their economies, the economic utility of children tends to decrease while, at the same time, the costs of having children (both direct costs and opportunity costs) increase. Hence the net value of children, in an economic sense, declines substantially over time. Costs of bearing and raising children in a developing society are often minimal, particularly in rural areas. Prenatal medical care is usually nonexistent, births often occur in the home attended by only a midwife, and expenses for education and medical care are nominal because of their unavailability. Even the expense of food and clothing may require a reallocation of resources within the family rather than true out-of-pocket costs. In economically developed countries, on the other hand, children are normally much more expensive to raise for several reasons. Prenatal care and delivery cost more, educational costs may be substantial owing to high educational aspirations for children, and general rearing costs are inflated because money spent on children is inevitably tied to the standard of living of the parents (Duesenberry and Okun, 1960; Blake, 1968; Namboodiri, 1972). In addition, indirect or opportunity costs (principally, the amount of income foregone by the parent

who cares for the children) are positively related to income (Mincer, 1963).

Higher costs of children in economically developed societies are accompanied by reduced economic benefits of children. In agriculture-based societies children are necessary to help out on the farm or in the family business, and they are usually the only source of old-age support for their parents. Economic development usually implies a decline in the size of the labor force engaged in agriculture and small family businesses, and thus a reduction in the productive utility of children. Children may also be less useful to parents because they spend more time in school. More developed countries usually provide social security, pensions, or welfare plans for the aged, so that children are not the only means of old-age support. Finally, because families are generally better off in these countries, parents do not need as much economic help from their children as do parents in less developed countries.

Economic benefits of children

According to the economic theories outlined above, the economic utility of children should be relatively low in Hawaii, and, in fact, should be lowest among the higher SES groups. It is convenient at this point to follow the categorization introduced by Leibenstein (1957) and consider separately children as old-age support and children as productive agents. The third category, the so-called "psychic utility" of children, is covered in other sections of this report.

Retired persons in Hawaii can generally expect support in old age through a combination of social security, state retirement funds, private pension plans, Medicaid, and other programs. Economic help in old age was thus not a highly salient advantage of having children for couples interviewed in Hawaii. Only 3 percent of all respondents spontaneously mentioned economic support in old age as an advantage of having children. An additional 10 percent mentioned help in old age without specifically indicating that economic assistance was meant. Help from children in one's old age appeared to be oriented more toward physical and psychological care than toward pure economic assistance. This observation is supported by responses to structured questions as well. Over 40 percent of parents considered "help in old age" to be an important reason for wanting to have another child (Table 4.1), but when help in old age was defined as economic support only 3 percent said they expected to rely a good deal on their children in old age. The majority did not expect to depend on their

Table 4.1 Perceived economic benefits and costs of children

(Percentage of respondents by selected measures, socioeconomic and ethnic group, and sex)

Measure	Urban middle		Urban low			Rural			
	Caucasian	Japanese	Caucasian	Japanese	Filipino	Filipino	Female	Male	All respondents
Old-age support									
Help in old age is an important reason for wanting another child	8	23	16	24	78	96	40	43	41
Expect to rely a good deal on children for old-age support	0	1	3	1	5	12	4	3	3
Do not expect to rely at all on children in old age	94	74	73	68	31	1	55	56	55
Other economic benefits									
An important reason for having another child is to have one more person to help the family economically	5	5	6	13	63	95	29	32	31
Expect economic help from sons	14	12	21	21	47	86	35	29	32
Expect economic help from daughters	13	9	18	13	15	24	20	9	15
Economic costs									
Economic costs of children are an important reason for not wanting any more children	57	62	71	71	73	81	71	66	69
Educating children will be at least somewhat of a heavy financial burden	68	66	69	76	66	77	74	69	71

children at all for old-age support, and the rest either thought their children would help out a little or said that help from their children would depend on circumstances. Most respondents hoped they would not have to seek economic help from their children, but if they needed it and their children could afford to provide it, they expected the children to help them. Children thus represented some reserve economic security rather than a real economic base for old-age support.

Evidently the economic structure in Hawaii is such that the productive utility of children is quite low, for not a single respondent mentioned help in a family business or farm as an advantage of having children. This finding is in sharp contrast to the case in many developing countries.

Turning once again to Table 4.1, we see that only 5 percent of middle-class respondents and slightly more lower-class Caucasian and Japanese respondents in Hawaii (6 percent and 13 percent, respectively) considered economic help to the family as an important reason for having another child. Substantially larger proportions of Filipino respondents considered economic help as an important reason to have an additional child. Expectations of any kind of economic help from children were generally low, with less than one-third of the respondents anticipating economic help from their sons and only 15 percent expecting financial help from daughters. Many more expected such practical support from their children as help with the housework, but this can be considered an economic benefit only in the broadest sense of the term.

Although parents generally did not expect to receive financial help from their children either while their children were growing up or when the parents became old, their economic independence appears to have been a relatively recent phenomenon. To determine how expectations of economic help might have changed during the lifetime of the respondents, we asked them a number of questions about the willingness of children nowadays to help their parents in certain ways compared with children's willingness to help when the respondents themselves were growing up. From Table 4.2 it appears that substantial changes in the perceived economic function of children have taken place within a single generation. Forty-one percent of respondents said that children today are less willing to support their parents when the parents grow old. Perhaps they would not need help from their children to the extent that parents did in the past; but even if this should be so, they believed that children were less willing to "help out" these days, and two-thirds of the respondents who perceived this

Table 4.2 Perceived changes in the economic utility of children over time

Utility	Percentage who said children nowadays are: More willing	Just as willing	Less willing	Of those who said "less willing," percentage who disapproved of change
To support parents in old age	6	44	41	66
To give part of their wages to parents when children start working	4	31	55	50
To live with parents after children marry	8	18	68	18
To help with chores around the house, on the family farm, or in the family business	5	34	56	78

NOTE: Percentages do not sum to 100 because other responses ("don't know," "it depends") are not included.

change said they were unhappy about it. Although respondents saw even greater changes taking place in the willingness of teenage children to contribute part of their wages to their parents, they were somewhat more tolerant of this change.

Changes in the economic function of children may also result from changes in family structure. The extended family was not a common phenomenon in our sample. Only 8 percent of the couples interviewed lived in the same house with the parents of either spouse, and only 1 percent of respondents expected to live out their lives in the same household with their own children. On the other hand, 11 percent expected to live with their children when they became old and, perhaps in part because there is a severe housing shortage on Oahu, 19 percent expected their children to live with them for a few years after the children married. More than two-thirds stated that children nowadays are not as willing to live with their parents after marriage as children used to be, and most of the respondents approved of the change.

Finally, respondents were asked how willing children are nowadays to help with chores around the house, on the farm, or in a family

business. Once again, perceived changes over time were substantial. A majority believed that children are less willing to do chores now than in the past and 78 percent said they did not like the change. Respondents appeared to view this generation of children as lazier or less obedient than the last generation.

Thus for the Hawaii sample the economic functions of children seem to have changed considerably in the last couple of decades. Children today are seen as much less committed to supporting their parents or even to helping out around the house, while they are also considered to create a heavy drain on the family finances (as we will show later in this chapter). It is no wonder, then, that 69 percent of our respondents said that the more children you have, the worse off you are economically.

Ethnic and socioeconomic differences. Children were found to have relatively little economic utility for urban middle-class Caucasians and Japanese, somewhat more for urban lower-class Caucasians and Japanese, and more still for urban lower-class Filipinos. The strongest perceptions of economic benefits from children were found among rural Filipinos. These cross-sectional differences are consistent with a decrease in the economic utility of children, observed by Leibenstein (1957), that coincides with economic growth over time. Children are economically most useful in agricultural settings and least useful in modernized societies. Japanese respondents in Hawaii expected to rely on their children in old age more than did their Caucasian counterparts, whereas Filipino respondents expected to be much more reliant than either group on their children in all economic spheres. A drastic contrast can be seen by comparing urban middle-class Caucasians with rural Filipinos. Only 8 percent of the former thought that old-age support was an important reason for wanting another child, while 96 percent of the latter thought it was. Nearly all (94 percent) of the Caucasian group expected no old-age assistance from their children, compared with only 1 percent for the Filipino group. Fourteen percent of the urban middle-class Caucasian group expected some economic help from sons, whereas 86 percent of the rural group expected some help.

Differences in the economic roles of male and female children can be seen from two of the items in Table 4.1. Among urban middle-class Caucasians and Japanese and urban lower-class Caucasians about as many respondents expected economic help from daughters as from sons. Among urban lower-class Japanese and especially among urban lower-class Filipinos, sons were expected to provide economic help in

more families than were daughters. The largest divergence was in the rural Filipino group, 86 percent of whom expected economic help from sons whereas only 24 percent expected economic help from daughters.

Differences between husbands and wives. Differences between husbands and wives in the perceived economic benefits of children were generally small. It was only in the expectation of economic help from daughters (and to a lesser extent from sons) that wives' perceptions of economic benefits were substantially higher. Wives also exhibited a more egalitarian attitude than husbands toward the economic role of sons and daughters, but they were still almost twice as likely to expect economic help from sons as from daughters.

Economic costs of children

Although family income was relatively high in the Hawaii sample, most couples were not immune to the economic burden of raising children. About 40 percent of the mothers in our sample were working at the time they were interviewed and over half had worked at some time in the past year. Their average income was quite low relative to that of their husbands, but employment of the wives helped to raise the mean family income to a relatively high level of $11,623. It should be noted, however, that the high cost of living in Hawaii tends to erode purchasing power and to make raising children unusually expensive.

As their answers to open-ended and structured questions revealed, parents in Hawaii were definitely concerned about the financial burden of raising children. Nearly 70 percent of respondents said that the financial burden of children was an important reason for not wanting any more children (Table 4.1). Economic costs were felt most by rural respondents and least by middle-class urban couples, but in every population subgroup they were a strong motivation to control family size. One of the principal costs of raising children is the expense of education. As Table 4.1 shows, more than two-thirds of the respondents believed that educating their children would be at least a somewhat heavy financial burden. And 25 percent of those believed that the expense would create a very heavy financial burden. Although middle-class respondents had more resources and fewer children, they felt the economic squeeze almost as much as the other groups, probably because they had higher educational aspirations for their children and also spent more on each child for other purposes.

To determine how difficult it would be to support families of

different sizes, we asked respondents how much of an economic burden it would be for them to raise one child, two children, three children, and so on up to six children (Table 4.3). Nearly all parents (93 percent) said that it would be fairly easy for them to raise only one child and 67 percent said that it would be fairly easy to raise two children. But a majority (59 percent) thought that three children would cause somewhat of an economic burden; most respondents (57 percent) said that four children would be a heavy burden. Five children would pose a heavy economic burden to 84 percent of the respondents, and six children would be a heavy burden to nearly all respondents (94 percent). From these figures, it is clear that in the Hawaii sample even parents with relatively high incomes ($15,000 or more) would find a large number of children (more than four) to be an onerous financial responsibility.

Many religions and cultures encourage couples to have as many children as they can provide for or even more than they can really afford. It is possible to see how respondents in Hawaii behaved in this respect by comparing the number of children they wanted with the economic burden they said that number of children would entail (last row of

Table 4.3 Perceived economic burden of raising different numbers of children

(Percentage of respondents who considered raising specified numbers of children to be fairly easy economically, somewhat of a financial burden, and a heavy financial burden)

Number of children	Fairly easy economically	Somewhat of a financial burden	A heavy financial burden
1	92.9	6.5	0.6
2	66.9	31.0	2.1
3	22.7	58.9	18.4
4	7.1	36.3	56.5
5	2.1	14.2	83.7
6	0.8	5.7	93.5
Desired number	33.0	39.9	27.2

Table 4.3). Thirty-three percent of respondents wanted to stop having children before they became much of an economic burden. An additional 40 percent thought that the number of children they desired would impose somewhat of an economic burden, but they wanted to limit their family size to a level that would not be a heavy financial burden. A substantial proportion of respondents (27 percent) wanted to have a number of children that would impose a heavy economic burden on the family. It is evident that a majority of the parents interviewed in Hawaii did not want to have just as many children as they thought they could afford and no more. One-third of the sample expected to have fewer children than they could provide for, and more than one-fourth expected to have more than they could easily afford.

While most respondents had a general awareness that children were expensive, few could estimate with accuracy the actual dollar costs. In pretests, we experimented with various questions about the financial cost of raising children, but the results were discouraging. Questions in the pretests concerned the cost of raising a child from birth through high school in Hawaii and the percentage of income that respondents spent on their children. Although many respondents were intrigued by these questions, it was clear that they had never before thought of children in precise economic terms. Most of those who did attempt to answer the questions made rather arbitrary guesses.

In the final questionnaire, the question about costs was more concrete and limited to a time horizon of one year: "About how much money in all do you think it has cost you to raise your children over the last twelve months?" Nevertheless, more than one-third of respondents were unwilling even to guess what that figure might be. The estimated costs for those who did respond are presented in Table 4.4. While we do not place great reliance on these figures as estimates of actual cost, they tell us something about respondents' perceptions of the cost of children and therefore it seems worthwhile to examine the averages, compare them across subgroups, and look for patterns in relation to other variables.

The average respondent estimated an annual expenditure on children of $2,262, or 19.5 percent of total family income. This amount works out to an average of 8.7 percent of family income (about $1,000) spent on each child. Most respondents did not specify how they arrived at their estimates, but we believe they usually estimated out-of-pocket financial costs, not including imputed costs or opportunity costs. The economic squeeze was felt most by rural Filipinos, who estimated that they spent nearly one-third of their income on

Table 4.4 Estimated economic costs of children

Item	Urban middle		Urban low			Rural	All
	Caucasian	Japanese	Caucasian	Japanese	Filipino	Filipino	respondents
1 Average amount spent on all children	$ 2,266	$ 2,390	$2,008	$ 2,726	$1,657	$2,876	$ 2,262
2 Mean family income[a]	$15,393	$15,188	$9,176	$11,058	$9,991	$8,930	$11,623
3 Percentage of mean family income spent on children (1/2)	14.7	15.7	21.9	24.7	16.6	32.2	19.5
4 Mean number of children	1.83	1.98	2.33	1.84	2.14	3.33	2.24
5 Average amount spent per child (1/4)	$ 1,238	$ 1,207	$ 862	$ 1,482	$ 774	$ 864	$ 1,010
6 Percentage of mean family income spent per child (3/4)	8.1	7.9	9.4	13.4	7.8	9.7	8.7

NOTE: Excludes respondents who did not estimate costs of raising children.

a Calculated by using midpoints of income ranges in question on total family income.

children; it was felt least by urban middle-class respondents, who estimated spending only 15 percent of their total income on their children. Rural respondents also claimed to spend the largest absolute amount on their children ($2,876), mostly because they had more children per family than any other group. Lower-class Japanese respondents estimated they spent the largest amount of money per child ($1,482); middle-class Caucasians were next ($1,238), followed by middle-class Japanese ($1,207). Lower-class Caucasians and Filipinos and rural Filipinos estimated they spent considerably less per child. In fact, lower-class Filipinos estimated that they spent an amount that was around half of the figure estimated by their Japanese counterparts, although again it should be stressed that these estimates may not have been very accurate.

The estimated costs are by no means small. It should also be borne in mind that most of the respondents' children were quite young, and hence costs could be expected to increase as they grew up. (Of course, rising costs of children may be offset by rising income over the life cycle.) Having established that respondents considered children to be expensive to raise in Hawaii and that most thought the expense was at least a partial deterrent to having additional children, it is interesting to explore the hypothetical effect of decreasing the economic burden of children. For this purpose, respondents were asked how many children they would want if: (1) their family income were to double and (2) the government were to provide free education for all children up to and including college. The first instance would affect the ability to purchase all commodities without influencing relative prices, while the second would decrease the cost of children only (and hence would make children relatively easier to afford). Respondents were asked how each of these situations would affect the number of children they wanted to have. Although such hypothetical questions often produce rather dubious results, it is of interest that only 15 percent said they would want more children if their income doubled and only 8 percent would increase their wanted family size if the government provided free education through college. If these results are to be believed, then the demand for children is rather inelastic and economic costs may really not act as a strong constraint in childbearing decisions. But the pervasiveness of economic considerations in responses throughout the questionnaire suggests that the economic burden of children does play a prominent role. Moreover, we are inclined to believe that people's actual responses to changing economic circumstances may be greater than they are willing to admit, at least with respect to childbearing.

5

family size and family planning

Family size

The average couple in the Hawaii sample had 2.3 living children, ranging from 1.9 children, on the average, for middle-class Caucasians to 3.2 children for rural Filipinos (Table 5.1). Respondents wanted to have .9 more children, on the average, leading to a total desired family size overall of 3.2 children. Two was the most popular number of children desired, but many respondents wanted either three or four children. Urban middle-class Caucasians and urban lower-class Japanese wanted the smallest number of children (2.7), rural Filipinos the largest (3.7). Husbands wanted to have slightly more children (3.4) than wives (3.1), even though there was a good deal of communication between spouses about how many children to have and the large majority of respondents said that family-size decisions were made jointly. Ideal family size, for the whole sample, was the same as wanted family size.

If respondents' family-size goals are not exceeded, the average completed family will be substantially smaller than the average family of orientation. Respondents came from families of five children, on the average, whereas they wanted to have closer to three children of their own (a decrease of more than one-third). Fertility may have fallen even more precipitously, since infant and child mortality was more prevalent in the past than it is today and higher fertility was necessary to compensate for it. The greatest changes in family-size goals were

Table 5.1 Selected measures of family size and family-size preference

Measure	Urban middle		Urban low			Rural			
	Caucasian	Japanese	Caucasian	Japanese	Filipino	Filipino	Female	Male	All respondents
Mean number of living children	1.9	2.0	2.5	2.0	2.4	3.2	2.3	2.3	2.3
Mean number of children wanted[a]	2.7	3.0	3.3	2.7	3.6	3.7	3.1	3.4	3.2
Mean number of children ideal[b]	2.7	3.1	3.0	3.1	3.4	3.8	3.2	3.3	3.2
Mean number of children in respondent's family of orientation	3.7	4.5	4.3	4.7	5.9	5.5	4.9	4.9	4.9
Estimated mean number of children in typical family in community	3.2	3.1	4.1	3.3	3.5	3.8	3.6	3.5	3.5
Mean number of children in "small" family	1.8	2.1	2.2	2.0	2.6	2.9	2.2	2.3	2.3
Mean number of children in "large" family	5.1	5.3	5.9	5.6	6.3	4.8	5.5	5.7	5.6
Percentage wanting "small" family	43	41	44	47	44	52	45	43	44
Percentage wanting "large" family	8	13	16	6	10	24	10	15	12

a Number of living children plus number of additional children wanted.

b Number of children respondents would want to have if they were starting their families again.

apparent among urban lower-class Japanese and Filipino couples. Filipinos still wanted to have between three and four children, which is above the current norm for the United States but still far below the average of five to six children that most of their parents had.

To explore respondents' perceptions of community norms with respect to family size, we asked them how many children they thought the typical couple in their community had by the time the couple stopped having children. The average estimate of 3.5 children is only slightly higher than the average number wanted by respondents, and these two values are likely to be more nearly equal if some respondents exceed their family-size goals. Thus respondents seemed to have fairly realistic perceptions about community family-size intentions. Caucasians and urban lower-class Japanese, however, wanted fewer children than they thought the average couple in their community would have. Their perceptions may reflect the true situation, i.e., that they actually will have fewer children than others, or may have resulted from respondents' being younger than the average couple in their community due to the age criterion in the sampling design.

Finally, respondents were asked to think of a small family and a large family and to state how many children they thought would be in each. These questions enabled us to compare their desired family size with their perceptions of what constitutes a large or a small family. The results are presented in the last four rows of Table 5.1. Over half of the respondents stated that a small family consisted of two children, and most of the others answered either three children or one child, for an average of 2.3 children. Most respondents considered large families, on the other hand, to have between four and six children, or 5.6 children on the average. Only 12 percent of respondents wanted what they considered to be a large family, compared with 44 percent who wanted to have a small family; the rest were ranged somewhere between. Even among rural respondents, those wanting a small family outnumbered those wanting a large family by more than two to one. It appears that large families were not very popular among any of the groups interviewed.

In many countries, wanted family size (defined as number of living children plus additional children wanted) has been found to be greater than ideal family size because many people exceed their ideal family-size goals. For the Hawaii VOC sample, however, this relationship did not hold. Ideal family size exceeded wanted family size for 23 percent of respondents, whereas wanted family size exceeded the ideal for only 15 percent (Table 5.2). It appears that many in the sample would

Table 5.2 Comparison of selected family-size measures
(Percentage of respondents)

Comparison	Greater by two or more	Greater by one	Same	Less by one	Less by two or more
Number of children wanted compared with number of children ideal	8	7	62	14	9
Number of children wanted compared with number of children in typical family in community	9	15	27	27	22
Number of children ideal compared with number of children in typical family in community	11	12	32	27	19

have had larger families if circumstances had permitted. Both wanted and ideal family sizes were smaller than typical family size for the community. Nearly half of respondents expressed family-size goals below what they considered to be typical, whereas only one quarter had family-size goals that were greater than typical. Our respondents thus revealed a preference for families that are "small" relative to typical family size in the community and with respect to respondents' own definitions of what constitutes a small family.

Childspacing

The rate of population growth is affected not only by how many children each woman has but also by when she has them. For women who marry, the age at which they bear children depends on their age at marriage and the interval between marriage and each birth. In this section, we will discuss the latter factor, i.e., the timing or spacing of births among respondents in our Hawaii sample.

The average interval between marriage and first birth for women in the sample was 16 months, but variation around this mean was great (Table 5.3). Urban lower-class women averaged only one year between

Table 5.3 Birth intervals, by socioeconomic and ethnic group

Birth interval	Urban middle		Urban low			Rural	All
	Caucasian	Japanese	Caucasian	Japanese	Filipino	Filipino	respondents
Mean number of months between marriage and first birth	23	17	11	12	12	19	16
Mean number of months between first and second birth	26	34	28	30	28	36	31
Mean number of months between second and third birth	34	30	27	47	30	28	31
Percentage who had first child before marriage	4	3	9	4	5	1	4
Percentage who had first child within first 8 months of marriage	29	35	39	52	35	6	32

Table 5.4 Ideal and actual spacing of first child
(Percentage of respondents)

Interval between marriage and first birth	Ideal spacing	Actual spacing
Less than one year, "right away"	28.4	52.4
1 year	40.4	27.3
2 years	22.4	10.0
3 years	3.7	5.7
4 years	2.2	1.8
5 years or more	2.9	2.8
All intervals	100.0	100.0

marriage and first birth, while for other SES groups the average was one and a half years or more. Second- and third-birth intervals were almost twice as long, about 2.6 years on the average. All of these birth intervals are slightly longer than average birth intervals among a comparable cohort of married women with spouse present throughout the United States in 1967 (United States, Bureau of the Census, 1971c: 26).[1] For example, second-birth intervals averaged 26 months in the national sample and 31 months in Hawaii. The average interval between marriage and first birth was 14.5 months in the national sample, compared with 16 months in Hawaii.

Our data contain strong evidence that many respondents had their first child earlier than they would have liked. Respondents were asked to state how soon after marriage they would have wanted to have their first child if they could have started their family over again. Answers to this question concerning ideal spacing are compared with the actual first-birth interval in Table 5.4. Only 28 percent of the respondents said they would have liked their first children within the first year of marriage or "right away," yet about half actually had their first child within the first year of marriage. Thirty-one percent said they would prefer to have waited at least two years before having their first child, but only 20 percent actually waited that long. Evidently respon-

1 Those women who were 14–29 years old in 1967 would have been in the age range of 20–35 in 1973, comparable to the ages of women in the Hawaii sample.

dents either were not entirely successful at controlling the spacing of their first child or in retrospect thought that they should have waited longer after marriage before raising children.

By breaking down the first birth interval into separate components, it is possible to estimate the incidence of illegitimacy and premarital pregnancy among women in our sample (see the last two rows of Table 5.3). About 4 percent admitted that they had had their first child before marrying and an additional 32 percent reported that they had had their first child within the first eight months of marriage. Among urban lower-class Japanese and Caucasians it appears that about half the wives were pregnant at the time they married.[2] Even in the urban middle-class areas more than one-third of the women had been premaritally pregnant. Rural Filipinos were the only group, it seems, without a substantial proportion of premaritally conceived births. A number of factors may have been responsible for the relatively long birth intervals of this group, including Catholic prohibitions against premarital intercourse, disruptions due to migration from the Philippines, and lack of a stable financial base.

A word of caution is necessary in interpreting these figures. There is some doubt about the accuracy of the birth-interval figures because many respondents, particularly males, could not remember their exact marriage date. There were discrepancies between marriage dates given by husband and wife or between marriage date and age at marriage in nearly 10 percent of all cases. Nevertheless, it was usually possible to reconstruct the correct dates from other information on the questionnaire or by contacting the couple again.

Attitudes toward contraception and abortion

Respondents in Hawaii were relatively sophisticated about family planning and quite favorably disposed toward contraceptive use, but their feelings about abortion were decidedly negative (Table 5.5). General approval of contraception by married couples to prevent a pregnancy

2 Although some of these births may have been premature, the incidence of birth within the first eight months of marriage is a reasonably good estimate of the proportion of women who were premaritally pregnant. One reason is that infant mortality is higher among premature babies, so that fewer of them would have survived to the interview date. In addition, some babies who were born nine months after marriage may have been conceived before marriage. Our findings on premarital pregnancy should be taken as a conservative estimate because of an expected tendency on the part of respondents to conceal premarital pregnancies.

was quite high (79 percent). Only 9 percent expressed outright disapproval, and an additional 12 percent expressed conditional approval or said they were not sure whether they approved or disapproved.

Since attitudes toward contraception may depend on the circumstances surrounding its use, respondents were asked their opinions about it in three separate situations: (1) to delay the birth of the first child, (2) to control the spacing or timing of births after the first child, and (3) to prevent further pregnancies after having all the children wanted. As expected, fewer respondents (63 percent) were sympathetic to contraceptive use before the first birth than to using it to space births or limit family size. An overwhelming majority approved of contraceptive use for spacing purposes after the birth of the first child (85 percent) and for limiting family size (91 percent). Differences between husbands and wives in attitudes toward contraception were minor, as were differences between Japanese and Caucasians. Filipinos were the least approving of contraception in general, and they were particularly averse to the use of contraceptives before the birth of the first child. But even the Filipinos in our sample strongly favored contraceptive use for limiting family size.

Although opinions toward contraception were quite favorable, feelings ran strongly against abortion. By a margin of two to one, respondents disapproved of a married woman's having an abortion to prevent an unwanted birth. It was surprising to encounter such prevalent antiabortion sentiment in Hawaii, which in 1970 passed the first liberalized abortion law in the country. The nature of the sample was at least partly responsible for this finding, since Filipinos in Hawaii are virtually all Catholic and nearly half of the total sample was Catholic. Yet even among non-Catholics there was a good deal of opposition to abortion. Japanese respondents constituted the only ethnic group that supported abortion, possibly because of the widespread use of abortion in Japan. Middle-class Caucasians were about equally divided on the issue of abortion, but lower-class Caucasians were solidly against it. Filipino respondents were virtually unanimous in their opposition to abortion. Wives expressed even more disapproval of abortion than husbands, but differences between the sexes were much smaller than differences between the ethnic groups.

Although abortion was strongly disapproved of in principle, under mitigating circumstances feelings about abortion shifted dramatically. Over 90 percent of the respondents said they would approve of an abortion if the doctor said it would be dangerous for a woman to give birth again, and 72 percent approved in cases of pregnancy resulting

Table 5.5 Attitudes toward birth control and abortion
(Percentage of respondents who expressed specified attitudes)

Attitude	Urban middle		Urban low			Rural			
	Caucasian	Japanese	Caucasian	Japanese	Filipino	Filipino	Female	Male	All respondents
Birth control[a]									
Generally approve of married couples' using birth control	87	91	89	87	62	73	80	78	79
Generally disapprove of married couples' using birth control	2	0	6	4	23	8	8	10	9
Approve of birth control									
to delay birth of first child	89	86	71	83	38	14	63	63	63
to control spacing or timing of births after first child	96	98	94	95	78	49	86	84	85
to prevent further pregnancies after having all the children wanted	93	98	94	99	79	93	90	93	91

Abortion[b]									
Generally approve of a married woman's having an abortion to prevent unwanted birth	38	43	26	49	10	0	25	29	27
Generally disapprove of a married woman's having an abortion to prevent unwanted birth	42	26	59	33	75	95	60	51	56
Approve of abortion									
if doctor says it will be dangerous for woman to give birth again	91	97	87	92	84	96	89	92	91
if couple cannot afford to have another child	43	69	38	59	36	3	40	44	42
if pregnancy will interfere with woman's work or career	25	25	14	17	10	4	12	18	15
if pregnancy resulted from rape	72	93	66	88	58	67	72	73	72

a Excludes 11 respondents who had not heard of birth control.

b Excludes ten respondents who had not heard of abortion.

c

from rape. Economic hardship was seen as a mitigating circumstance by some respondents; nevertheless, only 42 percent approved of abortion if the couple could not afford to have another child. In a situation where pregnancy would interfere with the wife's work or career, only 15 percent of respondents said they would approve of abortion. Apparently this last circumstance was considered by men and women alike to be a rather frivolous reason for having an abortion. In all circumstances, middle-class respondents were more favorable toward abortion than lower-class respondents, Japanese were more favorable than Caucasians, and men were more favorable than women. Questions about abortion produced some of the most intense feelings, both pro and con, among respondents of any questions in the interview. It is evident that the abortion issue will not be resolved to everyone's satisfaction as long as such conflicting attitudes prevail.

Knowledge and practice of contraception and abortion

Respondents in Hawaii were quite knowledgeable about contraception, and many couples had experimented with a variety of methods at different times during marriage. Only 11 respondents in the entire sample said they had never heard of family planning and only 10 respondents had not heard of abortion. For the rest of the respondents, information about eight commonly used contraceptive methods is presented in Table 5.6. A substantial majority of respondents had heard about each of the eight methods named by the interviewer, ranging from 72 percent who were familiar with the intrauterine device (IUD) to 97 percent who knew about "the pill." On the average, respondents knew about 6.5 of the eight methods.

These findings may exaggerate the extent of knowledge, since some respondents appeared reluctant to admit their ignorance of contraceptive methods. For this reason, an additional question was asked concerning respondents' knowledge of how to use each method. Presumably they might feel less stigmatized by denying technical knowledge of contraceptive methods. On the average, respondents claimed to know how to use 5.7 of the methods, somewhat below the average number they had heard about (6.5). But a clear majority still said they knew how to use each method.

Actual practice of contraception was quite widespread in the Hawaii sample (Table 5.7). Among fecund couples in which the wife was not pregnant at the time of the interview, 69 percent were using birth control. Forty-two percent of those not currently using contraception had used it at some time in the past, and only 11 percent of all respondents

Table 5.6 Knowledge and use of contraceptive methods
(Percentage of respondents, by knowledge and use of specified methods)

Contraceptive method	Had heard about method	Knew how to use method	Had used method	Currently using method
Pill	97	89	58	27
Condom	94	87	45	4
Rhythm	81	70	27	2
Tubal ligation	80	68	9	9
Withdrawal	76	72	30	2
Diaphragm	75	59	8	1
Vasectomy	75	65	3	3
IUD	72	58	16	11

had never used contraception and had no intention of using it in the future. This high rate of contraceptive practice was accompanied by a good deal of communication about family planning between parents. Contraception was certainly not a taboo subject, for 77 percent of respondents said they had talked with their spouses about it.

The most popular contraceptive technique was the pill, which 58 percent of couples had used at some time (see last two columns of Table 5.6). Next were the condom (used by 45 percent), withdrawal (30 percent), rhythm (27 percent), and the IUD (16 percent). Smaller numbers had been sterilized or had used the diaphragm, foam, or other methods. Only about 2 percent of all women admitted that they had had an abortion. The average couple had used about two different contraceptive methods and more than one-third of all respondents had experimented with three or more different types of contraception.

Respondents reported a general shift away from less effective contraceptive techniques, such as withdrawal and rhythm, to more effective and coitus-independent methods. Whereas more than a fourth of the couples had used withdrawal or rhythm at some time during their marriage, only 2 percent were currently using these methods. Other

Table 5.7 Contraceptive use and timing, by socioeconomic and ethnic group

Use and timing	Urban middle		Urban low			Rural	All
	Caucasian	Japanese	Caucasian	Japanese	Filipino	Filipino	respondents
Percentage of fecund couples (wife not pregnant) using contraception	71	83	80	80	53	47	69
Percentage of couples not currently using contraception who had used it in past	76	64	53	60	27	6	42
Percentage of fecund couples who had never used contraception and did not intend to use it in future	9	3	7	4	24	17	11
Percentage of couples who had ever used contraception by timing of first use							
Before birth of first child	53	38	35	29	3	3	30
After birth of first child	25	51	38	45	48	25	40
After birth of second child	14	7	17	22	23	33	17
After birth of third child	6	4	3	1	12	15	6
After birth of fourth child	2	0	4	3	14	10	5
After birth of fifth or later child	0	0	4	0	0	16	2

relatively ineffective methods that a substantial percentage of respondents had discontinued using were the condom and the diaphragm. Although the proportion of respondents currently using the pill (27 percent) was considerably less than the proportion who had ever used the method (58 percent), the pill was nevertheless the most popular method currently being used; sterilization and the IUD were next in importance. While changes in tastes may account for the shift to more effective methods, it is also possible that a life-cycle phenomenon was responsible. Couples may use relatively ineffective methods early in marriage when they are mainly concerned with spacing births and are less committed to avoiding pregnancy. Later, when they become more serious about avoiding undesired pregnancies, they may shift to more effective methods.

Most couples in the Hawaii sample who had ever used contraception began using it to delay rather than to prevent pregnancy. Thirty percent started using contraception even before the birth of their first child (Table 5.7). An additional 40 percent began use after the birth of their first child. Urban middle-class couples were most likely to have started using contraception early in marriage, whereas Filipinos, particularly those in rural areas, were relatively late contraceptors. Even Filipino respondents usually began using contraception after the birth of their first or second child, however, so that spacing of births was evidently a common practice in all groups.

Whether or not a couple is using contraception often depends on how many children they already have and how many more they want to have. Respondents in Hawaii followed a common pattern of greater contraceptive use with higher parity up to a point, and declining use thereafter (Table 5.8). Even at first parity, 58 percent of parents were using contraception. The proportion increased up to third parity (77 percent) before it began declining again. Among high-parity couples, use was about as prevalent (59 percent) as among couples with one child. Among respondents who did not want any more children, 80 percent were actually using contraception to avoid further pregnancies. Substantial proportions of those who wanted more children were also practicing contraception; nearly half of those who wanted three or more additional children were using some method of contraception, for example. It is clear, then, that spacing of births was a major objective of contraceptive use among the couples interviewed in Hawaii.

Religious differentials in family size and birth control

If we define as "progressive" those persons who want small families and who are most receptive to contraception and abortion, then

Table 5.8 Current contraceptive use, by parity and number of additional children wanted

Parity and additional children wanted	Fecund couples (wife not pregnant)	
	Number	Percentage currently using contraception
Parity		
1 child	198	58
2 children	168	76
3 children	112	77
4 children	41	71
5 or more children	47	59
Additional children wanted		
None	237	80
1 child	135	63
2 children	80	59
3 or more children	51	47

Catholics were the least progressive religious group interviewed (Table 5.9)—even though a majority of Catholics in our sample had used contraceptive methods proscribed by the Church. Catholic respondents differed most from others in their disapproval of abortion.

Atheists, at the other extreme, exhibited the most "progressive" birth control attitudes and behavior, with Buddhists and Protestants ranged somewhere between. For example, atheists wanted on the average 2.5 children, whereas Catholics wanted 3.5. Similarly, 87 percent of atheists were using contraception at the time of the interview, compared with only 55 percent of Catholics.

Correlates of family size and family planning

Most couples interviewed wanted to have between two and four children. But what determined which couples wanted two, which wanted three, and which wanted four? Most couples were using contraception to avoid unwanted pregnancies, but what determined who used and who did not? And what factors helped to establish respondents' attitudes toward contraception and abortion? These questions can be satisfactorily answered only by conducting multivariate analyses. A first

Table 5.9 Selected measures of family-size preference and birth control, by socioeconomic status and religion

Socioeconomic status and religion	Mean number of children wanted	Percentage currently using contraception	Mean score on index of attitudes toward birth control[a]	Mean score on index of attitudes toward abortion[b]
All groups	**3.2**	**68**	**9.1**	**7.0**
Urban middle	**3.0**	**77**	**10.1**	**8.2**
Catholic	3.3	62	9.6	6.3
Buddhist	2.9	74	10.2	9.3
Protestant	2.8	81	10.5	8.2
Atheist, agnostic	2.5	87	10.6	10.3
Other	3.9	90	9.6	7.5
Urban low	**3.3**	**67**	**8.8**	**6.7**
Catholic	3.5	56	8.4	5.9
Buddhist	3.0	74	9.8	8.2
Protestant	3.0	80	9.5	7.3
Atheist, agnostic	2.6	88	10.1	9.3
Other	3.4	82	8.1	7.1
Rural	**3.7**	**47**	**7.2**	**4.8**
Catholic	3.7	47	7.1	4.3
Other	4.0	50	8.3	5.0

a Index ranges from 1 (strongest disapproval) to 11 (strongest approval).

b Index ranges from 1 (strongest disapproval) to 13 (strongest approval).

step in that direction, and one that is itself enlightening, is to correlate fertility and birth control variables with each other and with selected background and socio-psychological characteristics (Table 5.10).

The three fertility variables (number of children living, ideal, and wanted) were highly positively correlated, as were the four family planning variables (contraceptive knowledge and use, and attitudes toward contraception and abortion), but the association between these two sets of variables was, as expected, consistently negative. All significant relationships of the background and socio-psychological variables with any fertility variable had the same sign as significant

Table 5.10 Correlations among fertility and birth control variables, background variables, and socio-psychological variables

Variable	Fertility			Birth control			
	Number of children wanted	Number of children ideal	Number of living children	Current contraceptive use	Number of contraceptive methods known	Situational attitudes toward birth control	Situational attitudes toward abortion
Fertility							
Number of children wanted	1.00	.67	.62	−.09	−.21	−.29	−.26
Number of children ideal	.67	1.00	.37	−.12	−.15	−.33	−.22
Number of living children	.62	.37	1.00	.06	−.15	−.24	−.17
Current contraceptive use	−.09	−.12	.06	1.00	.39	.40	.18
Number of contraceptive methods known	−.21	−.15	−.15	.39	1.00	.50	.28
Situational attitudes toward birth control	−.29	−.33	−.24	.40	.50	1.00	.32
Background							
Education	−.27	−.24	−.34	.24	.51	.47	.30
Income	−.13	−.12	−.11	.13	.19	.24	.20
Urban experience	−.08	−.15	−.17	.16	.19	.32	.21
Duration of marriage	.27	.17	.63	−.03	−.12	−.20	−.08
Wife's employment experience	−.13	−.04	−.05	−.02	.10	.11	.13
Socio-psychological							
Small-family press	−.07	−.06	−.07	.26	.35	.27	.22
Overall modernity scale	.01	.00	.03	−.08	−.06	−.13	.00
Husband's influence in decision-making	.00	.04	−.03	−.03	−.08	.00	.02
Mass media exposure	−.08	.01	−.06	.11	.18	.09	.14
Fatalism	.13	.12	−.01	−.07	−.24	−.08	−.15
Decision-mindedness	−.23	−.22	−.23	.23	.35	.49	.36

NOTE: If $|r| = .11$ or greater, $p < .01$; if $|r| = .07$ or greater, $p < .05$.

relationships with any other fertility variables and the opposite sign as significant relationships with any family planning variables.

Among the background characteristics, educational attainment was most strongly related to the fertility and family planning variables. Respondents with more education scored significantly lower on the fertility measures and significantly higher on the family planning measures. As expected, parents with smaller actual and wanted numbers of children had higher incomes, had lived longer in urban areas, and had been married a shorter time than those with high fertility. Women who had worked for a longer time since marrying tended to want fewer children than others, but their work experience bore no significant correlation with either the number of children they had or their practice of contraception.

The socio-psychological variables generally bore a much weaker relationship to the fertility and family planning measures. One major exception was the index of decision-mindedness, which measures the extent to which respondents were predisposed to make decisions about childbearing. Those who were inclined to avoid making decisions were less receptive to family planning, and they both had and wanted more children, than those who were highly "decision-minded." The amount of outside pressure on a respondent to have few children ("small family press") was strongly related to family planning knowledge, attitudes, and practice but only weakly related to fertility. Exposure to mass media and degree of fatalism were most strongly related to the number of contraceptive methods a respondent knew about, although they bore only weak significant relationships to most of the other variables. Two other measures, an overall modernity (OM) scale[3] and an index of which spouse has the stronger influence in decision-making, proved to be unrelated to family size and only weakly related to the contraceptive measures. Neither of these indices seemed to work very well for the Hawaii sample.

Thus background factors seemed to be more closely related to fertility and family planning than were most of the general socio-psychological variables. In the multivariate analyses presented below, major emphasis is placed on respondents' feelings about children and on some of the most powerful variables from the correlation matrix discussed in this section.

3 Adapted from the scale developed by Smith and Inkeles (1966).

6

the social context, the value of children, and fertility

Antecedent and consequent correlates of the value of children

Now that the major dimensions of the value of children have been mapped out for the Hawaii sample, it would be of particular interest to find out how respondents formed their attitudes toward children and to what extent these attitudes influenced the number of children they wanted to have. Although the sample survey medium is not ideally suited to answering these questions and the present exploratory study was not designed to resolve these issues fully, some feeling for the important underlying relationships can be gained through correlational analysis.

In this section, measures of the importance respondents attached to specified reasons for wanting or not wanting another child and nine general dimensions of the value of children are correlated with two background characteristics of respondents and two fertility-related variables (Table 6.1). The two background factors, education and urban experience, were chosen because they emerged as the most important determinants of the value of children in preliminary regression analyses of the nine subscales. More highly educated respondents and those who had lived in cities longer generally tended to de-emphasize the importance of children for providing continuity, tradition, security, parenthood satisfactions, incentives, and role motivations. They

Table 6.1 Correlations of value-of-children dimensions with selected background and fertility measures

Topic	Education	Urban experience	Number of children wanted	Situational attitudes toward birth control
Value-of-children subscales[a]				
1 Continuity, tradition, security	−.53*	−.43*	.25*	−.43*
2 Parenthood satisfactions	−.43*	−.32*	.25*	−.31*
3 Role motivations	−.51*	−.44*	.20*	−.40*
4 Happiness, affection	−.02	.22*	.13*	−.07†
5 Goals, incentives from children	−.34*	−.28*	.20*	−.26*
6 Social status from children	.15*	.11*	.03	.04
7 External controls on childbearing	−.02	.10*	.18*	−.24*
8 Costs of children	−.12*	−.15*	−.04	.03
9 Decision-mindedness in childbearing	.44*	.45*	−.17*	.42*
Reasons for wanting an additional child				
Enjoy having a small baby	−.11*	−.04	.11*	−.18*
To help carry on family name and traditions	−.38*	−.37*	.16*	−.36*
Want a boy/another boy	−.23*	−.26*	.07	−.20*
Want a girl/another girl	−.22*	−.19*	.10*	−.15*
Relatives feel I should have more children	−.03	−.01	.02	−.14*
To have a child to help me in my old age	−.44*	−.40*	.13*	−.46*
My religious duty to have children	−.02	.09†	.10†	−.17*
One more person to help family economically	−.46*	−.49*	.16*	−.45*
To make my marriage stronger	−.05	.02	.06	−.17*
To provide a companion for my children	−.06	−.07	−.03	−.06
Enjoy caring for, raising children	−.19*	−.23*	.16*	−.20*
Spouse wants more children	α	−.01	.04	−.07†

Table 6.1 *(continued)*

Topic	Education	Urban experience	Number of children wanted	Situational attitudes toward birth control
Reasons for wanting an additional child *(continued)*				
Fun to have children around the house	−.23*	−.25*	.14*	−.26*
Raising children helps me learn about life and myself	−.24*	−.20*	.06	−.23*
To have special feeling of love between parent and child	−.17*	−.20*	.12*	−.18*
To share what I have and know with children	−.16*	−.16*	.08†	−.19*
To have enough children survive to adulthood	−.12*	−.15*	.12*	−.19*
Reasons for not wanting an additional child				
Would be financial burden to family	−.19*	−.21*	.10*	−.08†
Spouse does not want more	−.12*	−.12*	.03	.03
Would restrict my freedom to do other things I enjoy	.05	.06	−.03	.04
Would be a lot of work, bother for me	.01	−.03	.04	α
Could not spend as much time with spouse	.12*	.06	.02	.06
Concern about overpopulation	.10*	.21*	−.17*	.12*
Would be emotional strain for me	.01	.10*	−.04	.07†
Would not be able to give enough care, attention to other children	−.22*	−.29*	α	−.12*
Would cause problems, strains between me and spouse	α	.09*	.02	.08†

$|\alpha| < .005$.

* Significant at .01 level.

† Significant at .05 level.

a See Appendix C for items included in each of the subscales.

appeared to be less concerned with many of the traditional reasons for wanting children. But these same "modern" respondents believed that children can provide acceptance and status for their parents in the community. Although nearly all respondents were aware of the high costs of raising children, less urbanized respondents and those with less schooling worried more about these costs, probably because they had fewer resources and also had larger families to support. These more traditional respondents, however, were less likely to feel that the costs of children (either economic or noneconomic) should be considered in decisions about how many children to have. They were also less likely to consider alternatives to having children. Perhaps because of their strong motivations to have children, they did not seriously consider costs until a very large family size was reached.

A similar pattern is reflected in the important reasons respondents gave for wanting or not wanting an additional child. In this context the responses were more personal and specific, compared with the nine general dimensions of the value of children discussed above, which are more normative and general. Respondents with more education and urban experience tended to see fewer important reasons for wanting another child. They were particularly unlikely to want additional children for economic help, for care in old age, or for continuing the family name and traditions. Although these respondents generally discounted the adverse influence of another child on the family finances or on the care they would be able to give their other children, they were more likely than others to be concerned about the population problem and to stress the deleterious effects of additional children on their emotional well-being and marriage.

Correlations of the value-of-children measures with the consequent fertility variables were somewhat weaker on the whole but were still significant at the .01 level in the majority of cases. Respondents who expressed more traditional attitudes toward children tended to want larger families and to have less favorable attitudes toward birth control. Respondents with less progressive fertility attitudes—that is, those who wanted large families and were less receptive to birth control—valued children for the continuity and security they provide, for their reinforcement of the parents' sex roles, for the incentives in life they give their parents, and for the happiness, affection, and other satisfactions that parents derive from children. As expected, respondents who held progressive fertility attitudes did not feel heavily encumbered by external controls on childbearing and they were more "decision-minded" in their childbearing than the traditional group. Two addi-

tional value-of-children dimensions, social status from children and the costs of children, did not bear any significant relation to the fertility measures even though they were associated with the background factors. Perhaps social status was considered a useful by-product of having children, but it was not considered important enough to influence fertility decisions. With respect to the costs of children there were probably two opposing forces that tended to neutralize each other and that would explain the lack of any relationship between perceived costs and fertility. On the one hand, those who thought that children were costly might have been induced to lower their family-size goals; on the other, those who wanted large families were more likely to feel the heavy costs of such a venture. Sensitivity to those costs helps to explain why respondents in the latter group, who wanted a large number of children, nevertheless cited the financial burden as an important reason for not wanting an additional child. Perhaps the costs planted some ambivalence in their minds but the advantages of having another child outweighed the costs.

The only other reason given for curtailing fertility that was significantly related to both wanted family size and birth control attitudes was concern about overpopulation. Respondents for whom this was an important reason actually wanted fewer children than those who did not see overpopulation as a factor in their own decisions about having another child.

Finally, a significant negative correlation was found to exist between birth control attitudes and every reason given for wanting an additional child (except companionship for other children). Most of the reasons for wanting an additional child were positively correlated with total number of children wanted as well. Correlations were highest with three factors—continuity of the family name and traditions, care in old age, and economic help for the family. All of these are strong traditional motivations for wanting children that tend to diminish in importance with economic development and modernization. Only the Filipino respondents, particularly those in rural areas, held these particular values with any real tenacity. As we have already seen, Filipino respondents also exhibited the strongest fertility desires and the least favorable attitudes toward birth control.

In summary, most of the value-of-children dimensions were found to be significantly correlated with both background factors and fertility-related variables. In particular, respondents who had had more schooling and had spent a larger portion of their lives in urban areas showed less concern than others about many of the traditional reasons

for wanting children. They were considerably more likely to think that the costs of children should be a factor in childbearing decisions even though the financial burden for them was relatively small because of their higher incomes. They expressed a greater concern about the problem of overpopulation and were more likely to consider alternatives to children. Respondents who professed these same "modern" values with respect to children also tended to want smaller families and to approve of the use of contraception to achieve their family-size goals.

Three final points should be made about the above analysis to forestall misinterpretation. First, the correlations shown in Table 6.1 are all based on the entire Hawaii sample. When each of the six SES-ethnic subgroups is considered separately, many of the significant correlations vanish or even reverse their signs. The diminished significance of the correlations is at least partly explained by the small number of respondents in each subgroup. It may also reflect a certain degree of homogeneity within subgroups that is not evident across subgroups.

Second, there is a strong possibility that some response bias exists in the value-of-children measures used in this analysis. As we suggested earlier, certain respondents, presumably those with less education in particular, may have felt more comfortable agreeing with the interviewer than expressing contrary, if true, feelings. Moreover, respondents who did not want any more children may have been reluctant to mention reasons for wanting an additional child, and those who wanted more may have been reluctant to cite reasons for not wanting an additional child, even if they were ambivalent about their decision.

Finally, correlation does not imply causation. Certainly there is good reason to believe that people from different backgrounds tend to develop different attitudes toward children and childbearing and that these feelings may in turn influence their family-size goals and fertility behavior. But the correlational analyses presented above can neither prove nor disprove this supposition. The direction of causation, if any, is not even clear in all cases. Perhaps people decide on their desired family size and then find reasons to rationalize that decision, rather than formulating their family-size goal on the basis of their feelings about the value of children. What this exploratory study shows is that the expected relationships do exist, quite strongly in many instances, and that further research is indicated.

Relation of economic value of children to background characteristics and fertility

The economic benefits and costs of children will be examined in a multivariate framework in the next section, but it is useful at this point to look at simple correlations between economic factors and both background factors and fertility-related variables. Four indices of the economic costs and benefits of children were chosen for this purpose:

1. *Economic costs of children.* This index is composed of four components dealing with the perceived economic burden of the number of children wanted, the financial burden of having another child, the financial burden of educating one's children, and the financial burden of raising children in general.
2. *Number of children that would be a heavy economic burden.* The index refers to the total number of children that respondents believed would be a heavy burden for them to raise.
3. *Expected economic help from children.* This consists of six components related to expected economic help from sons and daughters, economic support in old age, and economic help from having another child.
4. *Decreased utility of children.* The index is a linear combination of responses to questions about the changing economic usefulness of children over time (see Table 4.2). High scores on this index imply that children had become much less useful economically since the time when the respondents were growing up.

Looking at the first two indices (Table 6.2), we see that, as expected, respondents who found the economic costs of children to be high thought that they could not raise many children without the children's becoming a heavy economic burden on the family. A negative correlation of .35 was found between these indices. More modern parents, those with more education and income and more time spent in urban areas, felt the costs of children significantly less than others. This does not mean that more modern parents spent less money on their children; in fact the opposite was true. Rather, more modern couples expected to have fewer children and had more resources to care for them so that the economic burden was not so great for them. Couples who had been married longer felt more burdened by the economic costs of children, probably because they had more children and their children were older, so that the costs were more of a reality for them. The economic costs of children bore no apparent relationship to the amount of time a wife had worked since she married.

Index 1 (economic costs of children) was positively related to family-size goals and parity and inversely related to various measures of contraceptive knowledge and use. This finding does not imply that

Table 6.2 Correlations of economic indices of the value of children with background, fertility, and birth control variables

Variable	Index (1) Economic costs of children	(2) Number of children that would be heavy economic burden	(3) Expected economic help from children	(4) Decreased utility of children
Economic costs and benefits				
Economic costs of children	1.00*			
Number of children that would be heavy economic burden	−.35*	1.00*		
Expected economic help from children	.34*	−.08†	1.00*	
Decreased utility of children	α	−.02	−.09†	1.00*
Background characteristics				
Education	−.31*	.03	−.53*	.04
Income	−.29*	.14*	−.26*	.08†
Urban experience	−.32*	.09†	−.44*	−.08†
Duration of marriage	.21*	.15*	.15*	.06
Wife's employment experience	−.02	α	−.14*	.05
Fertility and family planning				
Number of children wanted	.32*	.35*	.26*	−.07
Number of children ideal	.19*	.36*	.25*	−.03
Parity	.33*	.27*	.21*	−.01
Current contraceptive use	−.04	−.03	−.30*	.04
Number of contraceptive methods known	−.18*	.07†	−.49*	.06
Situational attitudes toward birth control	−.14*	−.07†	−.46*	.13*
Situational attitudes toward abortion	−.16*	−.01	−.27*	.01

$|\alpha| < .005$.

* Significant at .01 level.

† Significant at .05 level.

a perception of high costs encourages people to want more children; on the contrary, we would expect high costs to have a restraining effect on family-size goals. That effect would not show up as a negative correlation in the first column of Table 6.2, however, because couples who had decided to reduce their fertility would no longer feel the heavy economic strain. What these relationships do show is that couples who had decided to have large families felt most burdened by the high costs of raising children. Although indices 1 and 2 were found to be negatively related to each other, they generally bore the same relationship to fertility and family planning. Evidently, those couples who believed they could afford to raise a large number of children actually had more children than other couples, or, conversely, those who had more children believed they could afford to raise large families.

Those same people who felt the economic burden of children most strongly also tended to expect more economic help from their children. Thus the high expenses that accompany large numbers of children were offset to some degree by economic benefits expected from these children. As we have already seen, rural Filipinos scored highest on both perceived economic costs and perceived economic benefits of children. Perhaps the high costs of raising children necessitate a larger economic contribution to the parents from the children. If couples have many children but low income, they are not in a very good position to be able to run their households or provide for their old age without some help from their children.

The remaining two indices were used to summarize the economic utility of children. Index 4, which indicates how much the economic utility of children has decreased over time as viewed by parents, was not very powerful in most cases. The decline in the economic utility of children was felt strongly by respondents in all groups, and the concept itself proved to be not particularly relevant without a baseline knowledge of the utility of children in the past.

Index 3 (expected economic help from children) was more useful. A strong inverse relationship was found between expected economic help on the one hand, and education, urban experience, and family income on the other. In addition, women with extensive work experience were less likely to expect economic help from their children. Parents who had been married longer expected to be more reliant on their children, possibly because their children were close to the age when they would actually be earning money. All of the anticipated relationships between economic help and fertility-related variables showed up

strongly. Respondents who expected substantial economic help from their children wanted and actually had more children, were less likely to be using any kind of contraception, and were less knowledgeable about and less favorable toward birth control than respondents without such expectations. Once again, though, the direction of causation is in some doubt. Did those who found children to be economically beneficial want more children for that reason or did those who wanted more children consequently expect to rely more on their children—or is the relationship perhaps spurious? More detailed analyses are needed to answer this question.

Determinants of family size and family planning attitudes and behavior

Knowledge of the satisfactions and costs of children is particularly useful if it can be shown that people's feelings about children actually influence their family-size goals and their receptivity to the use of contraception to achieve those goals. Although the influence of socio-demographic background factors on fertility and family planning has been well established in previous studies, efforts to assess the impact of psychological factors on fertility have failed to demonstrate a clear association. Most of the studies incorporating psychological measures have been criticized for employing inadequate methodologies. It is hoped that the present study, by using a more refined methodology and encompassing the entire range of attitudes toward children (economic, social, and psychological), will be able to suggest a stronger influence of psychological variables on decision-making processes.

In this exploratory study, it is not our intention to confirm or deny hypotheses about micro-level determinants of fertility and family planning or to test rigorously the value-of-children model that we have proposed. Rather, we will present some illustrative results from multiple regression analyses to demonstrate the potential explanatory power of value-of-children items. Five dependent variables have been selected for this purpose, three dealing with family size—parity, number of additional children wanted, and total number of children wanted (the sum of the first two measures)—and two dealing with family planning—attitudes toward the use of birth control in specific situations and current use of contraception. For each dependent variable, five sets of multiple regressions were run, the first with a set of socio-demographic variables as predictors, the second adding a set of economic value-of-children variables, and the third adding a set of psychological-social value-of-children variables. From these regressions it is possible to see how much additional explanatory power is provided by the value-of-

children variables after socio-demographic factors have been taken into account. In addition, regressions were run with only the psychological-social value-of-children variables and with these plus the economic value-of-children variables. The strength of prediction of these regressions can be compared with the results of the regressions that include only the socio-demographic variables.

The proportion of variance (R^2) in the five dependent variables explained by several sets of predictors is shown in Table 6.3. Overall the socio-demographic variables by themselves explain between 7 percent and 43 percent of the variance in the dependent variables. When the economic value-of-children variables are added, the percentage of variance explained increases proportionally by anywhere from 14 percent (in the case of parity) to 75 percent (for number of children wanted). The further addition of psychological-social value-of-children variables to the above sets augments the explained variance only slightly in most cases. Thus the value-of-children variables taken together substantially improve the prediction of each of the family-size and birth control measures. But most of the increased explanatory

Table 6.3 Prediction of selected family-size and birth control measures, as shown by proportion of variance explained (R^2)

Predictors	Number of children wanted	Parity	Number of additional children wanted	Situational attitudes toward birth control	Current contraceptive use
Socio-demographic	.12	.43	.14	.26	.07
Socio-demographic + economic value of children	.21	.49	.21	.32	.12
Socio-demographic + economic + psychological-social value of children	.25	.51	.23	.41	.15
Psychological-social value of children	.11	.08	.04	.35	.11
Economic + psychological-social value of children	.19	.23	.12	.36	.14

power is due to the influence of the perceived economic costs and benefits of children rather than the psychological-social values associated with children, except in the case of birth control attitudes.

In addition to the above analysis, it is instructive to compare the total explanatory power of the socio-demographic background factors with that of the value-of-children measures. For three of the five dependent variables the value-of-children measures explain a substantially larger proportion of the variance than do the traditionally important socio-demographic variables. The psychological-social values of children are particularly potent in explaining respondents' attitudes toward birth control. In other cases, economic factors seem to dominate. For only one variable, parity, does the effect of socio-demographic background overwhelm the influence of values of children. This finding is not unexpected since the number of children a person has is the cumulative result of past actions, whereas our study measures only present perceptions of the satisfactions and costs of children. To the extent that these perceptions change over the life cycle, one would expect parity to be more strongly related to the socio-demographic factors, which are relatively immutable. In fact many respondents indicated that their feelings about children had changed as a result of the experience of having and raising children. There would presumably be a closer relationship between the value of children and parity if attitudes toward children had been measured at the time that childbearing decisions were actually being made.

Because this is an exploratory study, many of the measures used for the value of children are innovative and experimental. For this reason the quality of measurement of the value dimensions varies and not too much reliance should be placed on any single measure. Nevertheless, it is useful to see which predictors are most consistently related to fertility and family planning in a multivariate framework. Those measures of the value of children that are not significant in this analysis may not in fact have any net influence on the dependent variables, or they may simply not be adequate measures.

With these cautions in mind, we can proceed to look at the relative effects of specific socio-demographic and value-of-children variables on family size and family planning. Table 6.4 shows the standardized regression coefficients (betas) for five regressions in which all three sets of predictors are included. Among the socio-demographic factors, duration of marriage was easily the most important determinant of family size for the Hawaii sample. The longer respondents were married, the more children they had but the fewer additional children they

Table 6.4 Prediction of selected family-size and birth control measures, as shown by standardized regression coefficients (betas)

Predictors	Dependent variables				
	Number of children wanted	Parity	Number of additional children wanted	Situational attitudes toward birth control	Current contraceptive use
Socio-demographic					
Age	−.10	.01	−.13†	−.07	α
Duration of marriage	.28*	.57*	−.28*	−.04	.04
Education	−.09†	−.03	−.02	.16*	.07
Urban experience	.08	.05	−.01	.01	.03
Income	−.04	−.10*	.02	.13*	.05
Economic value of children					
Economic help from children	.17*	.02	.15†	−.13†	−.19*
Economic cost of children	−.24*	−.21*	−.07	−.01	.02
Economic burden of children	−.01	.22*	−.23*	.13*	.12†
Psychological-social value of children					
Continuity, tradition, security	−.01	.01	−.01	−.10	−.03
Parenthood satisfactions	.13†	.05	.12†	−.06	.09
Role motivations	−.04	−.06	.04	−.07	−.15†
Happiness, affection	.04	.09†	−.06	.07	−.09
Goals, incentives from children	α	−.01	−.01	.06	.10
Social status from children	−.01	−.05	.04	.02	.08
External controls on childbearing	.15	.06	.10†	−.25*	−.08
Decision-mindedness in childbearing	−.07	−.07	−.02	.21*	.05
R^2	.25	.51	.23	.41	.15

$|\alpha| < .005$.

* Significant at the .01 level.

† Significant at the .05 level.

wanted to have. Beyond the influence of marriage duration, age had little to do with actual or wanted family size. Respondents who were older did want somewhat fewer additional children than the number they already had, however.

Education bore a significant negative relationship with the total number of children wanted, but it had no influence on parity or additional children wanted. Since the zero-order correlation of education with parity was relatively high (−.34), it appears that the influence of education was attenuated by other predictors in the regression that are related to education. Respondents with higher income had fewer children but the direction of causation is not clear. Perhaps couples who have fewer children are able to earn more money primarily through employment of the wife. This interpretation is supported by the lack of any independent relationship between income and wanted family size. The one remaining socio-demographic variable, measuring the percentage of a respondent's life spent in urban areas, was not significantly related to any of the dependent variables.

Two measures related to family planning are used in the final regressions. The first is an index of favorability toward the use of birth control in three situations—before the birth of the first child, for spacing after the first child, and to prevent further births after desired family size is achieved. The second measure is a dichotomy, indicating whether or not fecund couples are currently using birth control. The attitudinal index was positively related to both education and income, but none of the socio-demographic variables was a significant determinant of whether or not contraception was being used. Contraception for spacing and limiting family size is so widespread on Oahu that contraceptive use at any time may not be particularly influenced by a respondent's background or current situation.

The economic value-of-children measures proved to be quite strong, with two out of the three economic measures being significant predictors of family size and contraception in every regression. Respondents who expected to rely on their children for economic support wanted to have more children than those who were economically independent of their children. On the other hand, those who thought that children were very expensive to raise tended to want fewer children than those who could afford more children. The perceived economic burden of raising and educating children bore an interesting relationship to the two components of wanted family size (parity and additional children wanted). It was positively related to parity, indicating that those who already had a large number of children were particu-

larly cognizant of the economic burden of a large family. Yet those who felt the financial strain most were least likely to want additional children. In the case of parity it is clear that the causality runs from the number of children to the perceived economic burden rather than the reverse, and hence the R^2 for parity is probably inflated.

Economic factors also influenced both the attitudinal and the behavioral measures of family planning in the expected direction. Respondents who expected to be economically reliant on their children were less receptive to contraception and less likely to be practicing it at the time of the interview. Respondents who perceived the economic burden of children to be great, however, were more favorable toward birth control and more likely to be using some contraceptive method.

The influence of individual psychological-social values of children appears to have been meager in most cases and no single measure is consistently significant throughout the regressions. The strongest relationships appear in the prediction of birth control attitudes. Respondents who felt external pressures to have large families were less favorable toward birth control, whereas those who were more willing to evaluate each childbearing decision and consider alternatives to children were more favorable toward birth control. Actual use of contraception was not significantly affected by either of these same factors, however.

Other noneconomic values of children emerged as important predictors in some regressions—in particular, parenthood satisfactions, role motivations, and happiness and affection. The relationships were all in the expected direction but none of the values was consistently large nor was the strength of the relationships impressive. It is possible, of course, that the lack of strong relationships for these particular variables was a function of measurement problems. Alternative measures of psychological and social values of children used in other regressions not reported here did yield more promising results.

In summary, the economic and psychological-social values of children together add substantial explanatory power to the prediction of family size and family planning attitudes and behavior, even after the standard socio-demographic variables have been taken into account. The perceived economic benefits and costs of children appear to be particularly important determinants of these family-size and birth control measures. Evidently economic motives do play an important part in fertility decisions for some people in Hawaii.[1] The psychological

1 Few previous studies have explicitly attempted to examine the influence of economic factors on fertility decisions. One major study of economic motives

and social values of children reported here do not substantially increase the proportion of variance explained after socio-demographic factors and economic value-of-children measures have been accounted for, but they do retain an important net influence in the prediction of attitudes toward birth control.

Several caveats have already been mentioned in connection with the interpretation of the regression results. One further caution is in order. Because the number of respondents in any ethnic-SES group is too small for reliable regression results, all of the regressions reported in this section are for the total sample, As noted before, the sample was not representative of the population of Hawaii or Oahu and it is probable that the findings would be somewhat different if a different sample had been used. The results reported here are impressionistic rather than definitive. They do, however, indicate the potential influence of the perceived satisfactions and costs of children on fertility and family planning decisions and hence they augur well for future research in this area.

for family limitation in Taiwan (Mueller, 1972) confirmed the hypothesis that economic considerations have a significant bearing on fertility decisions.

7

policy recommendations and implications for future research

Recent events in Hawaii have led to a general consensus among residents, politicians, and even many business people that Oahu is fast becoming or has already become overcrowded. The high density of Oahu's population (408 persons per square kilometer in 1970) has contributed to a number of problems including deterioration of the environment, the creation of a human "jungle" and a noisy conglomeration of high-rise buildings in Waikiki, a severe shortage of reasonably priced housing, traffic problems, and the overcrowding of recreational facilities. The publication of *The Maximillion Report* (Babbie, 1972), which advocated a concerted effort to limit population growth in Hawaii and proposed a population ceiling of one million persons, focused public attention on the state's population problems. The state government has responded to fears of too rapid growth by establishing a temporary commission on Population Stabilization, the first one of its kind in the United States.

Of course, population growth in Hawaii is not entirely due to the excess of births over deaths in the state. Migration has played and continues to play an important role in Hawaii's population growth. Although the primary factor in Hawaii's future growth is likely to be inmigration rather than fertility (Gardner and Nordyke, 1974:102; Nordyke, 1973), there is some question about the degree to which

migration rates are amenable to change through public policies.[1] In fact, any move to restrict migration into the state would very likely run counter to constitutional guarantees and could not therefore be implemented. There may be legal ways to discourage migration to Hawaii, but those methods of controlling population growth are bound to have an adverse effect on present residents of the state. Public policy may well be more effective in inducing reductions in Hawaii's fertility rate, which, for many decades, has been considerably higher than in the United States as a whole (see Fisher, 1973, figure 5). Although even a rapid reduction in fertility rates could not by itself alleviate conditions of overcrowding on Oahu, it is clear that a continuation of present rates will only serve to exacerbate the problems of growth discussed above.

Public policies designed to influence fertility rates can operate through several mechanisms. One is to make it easier (or more difficult) for couples to attain their desired family-size goals. A number of policies that have been widely adopted in recent years have removed pronatalist restrictions on individual fertility choices by permitting the dissemination of family planning information and services, the development of contraceptive technology, and relaxation of restrictive laws on contraception and abortion. Another mechanism is to attempt to change couples' desired family size by influencing the motivational structure behind family-size decisions. An example is a mass media campaign presently being conducted in Hawaii by Planned Parenthood that describes "right" and "wrong" reasons for having children, thereby suggesting a "proper" judgmental context for childbearing decisions. Such programs may meet with some degree of success, but policies of this kind that attempt, either explicitly or implicitly, to change the balance of positive and negative values related to children are not likely to be effective in the absence of accurate knowledge about people's motivations to have children. Basic research on the value of children, therefore, can provide a crucial input in the formulation of population policies.

This report takes a first step in providing information about childbearing motivations that can guide population policies in Hawaii. It should be emphasized once again that because of the nature of the sample in this survey the data cannot be used to make generalizations about the entire population of Hawaii. The data do, however, measure values and motivations that a large percentage of the population on

1 For a comprehensive discussion of this issue, see Hood and Bell (1973).

Oahu hold with respect to children. As such, they can be used to speculate about the effects of various policies on the rate of natural increase of Oahu's population. Many of the policy recommendations presented below are intended to result in a reduction of fertility because we believe that is a desirable objective in view of Hawaii's current demographic situation. But it should also be recognized that a reversal or modification of most of those policies could result in the maintenance of present fertility rates or even an increase in fertility.

Finally, some of the proposed policies are desirable (or undesirable) for reasons that are totally unrelated to their impact on fertility. It is not suggested that policies be established on the basis of demographic considerations alone. On the other hand, policy makers cannot afford to ignore the possible demographic impact of any policy proposal. It is against this background that the following recommendations are offered.

Policy recommendations

1. It is clear from the multiplicity of motivations for having children which respondents found to be salient that there can be no single, simple substitute for a child. For example, parents derived a great deal of pleasure from watching their children grow and from guiding their development. Children were also regarded as necessary for making a family complete and providing family life. It is difficult to imagine anything that could substitute adequately for children in satisfying all of these particular values. There may be a set of needs or desires that only children can completely satisfy. This does not necessarily imply high levels of fertility since these values may be satisfied by having only one or two children. Even if a large number of children is required to satisfy certain desires, the high cost of raising many children may be prohibitive and may make these values unattainable.

Although only children can satisfy certain desires, there are alternatives for some of the emotional satisfactions children provide and these alternatives should be nurtured. For example, policies may be implemented to: (a) upgrade educational opportunities and career opportunities for women in order to provide alternative sources of companionship and interest as well as fulfillment;[2] (b) provide *meaningful* job opportunities for both women and men—jobs that could substitute in part for the function of children as an incentive in life and as a catalyst

2 Increasing potential earnings available to wives in the labor market may also have an important negative effect on fertility (see Cain and Weininger 1973).

for personal development; (c) encourage (or refrain from discouraging) alternative life styles, such as communal living arrangements, by eliminating discriminatory tax regulations and discriminatory zoning and building code provisions or by modifying marriage and divorce laws. Under communal living arrangements some of the emotional value of children can be gained from children of other couples rather than one's own children. In addition, other adults may help to provide some of the companionship, love, and fun that are usually sought from children. Finally, other children in the communal group can provide satisfactory peer companionship for one's own children, thereby lessening or eliminating the perceived necessity to provide sibling companionship for them. It should be noted that communal living arrangements may have some offsetting pronatalist effects. In particular, many of the costs of children (financial costs, opportunity costs, and possibly emotional costs) are probably lower in a communal environment. It is difficult to predict, therefore, the net effect on fertility of this type of living arrangement.

2. The values of self-enrichment and personal development may be fostered by means other than children. For example, interesting and meaningful adult education courses could be established and their curricula could be broadened to attract those who would not normally consider going back to school. The potential audience could be augmented by offering courses at home from colleges "without walls," perhaps using the medium of television. Pleasurable learning or growth experiences could also be provided by travel programs that combined local or long-distance trips with a study component (such as history, anthropology, art, or archaeology).

3. A strong economic incentive to have large families still exists among some high-fertility groups in Hawaii. Broadening social security and pension provisions to provide adequate support after retirement would serve as an alternative source of economic security for these families. Security of this type is particularly important at present because the purchasing power of those on fixed incomes is being rapidly eroded by inflation. Other measures that provide economic security (e.g., unemployment benefits and health insurance) should also be augmented. These measures would not affect the large majority who do not have to rely on their children for economic security but may have an impact on the minority who are economically dependent on their children.

4. Most respondents in the Hawaii sample were well aware of the high financial costs of raising children. Moreover, financial costs were

cited by respondents in every ethnic and SES group as the major reason for not wanting more children than they had decided to have. In spite of the high costs, numerous government policies tend to ease the financial burden of children. If these pronatalist policies were eliminated and less favorable measures were substituted, the higher economic costs of children might further discourage prolific childbearing. Policies that would make it more expensive to have and raise children include: reducing or eliminating state and federal tax exemptions for children or making tax exemptions for children progressively smaller for higher-order births, scaling delivery costs upward for higher-order births, reducing paid maternity leave for women having higher-order births, offering sterilization and abortion free or at considerably lower rates than childbirth, reducing public subsidies that operate as transfer payments such as free public education, increasing tuition costs at public colleges and universities, making public housing more easily available to small families, eliminating tax deductions for the cost of child care, and eliminating reduced family fares such as those offered by airlines.

5. One problem with increasing the cost of childrearing is that it is not only the parents who have to pay if they insist on having large families. The real burden falls on the children themselves if they cannot be adequately cared for. One way to avoid this dilemma is to increase the *perceived* costs of children rather than the actual costs. Although the VOC respondents believed that raising children was expensive, few of them seemed to realize how high the costs really were. In addition many respondents said that they did not realize how expensive children were until after having them. Therefore, an informational program to heighten awareness of the costs of children might influence family-size decisions without having the adverse effects on children that an increase in real costs would have. The total discounted costs of raising and providing a college education to a child in the United States have been estimated to be as high as $60,000 if opportunity costs to the mother are taken into account (Commission on Population Growth and the American Future, 1972: table 9.1). Recent inflation and the cost of living in Hawaii undoubtedly make the costs of raising children in Hawaii even higher. Information about such costs should be disseminated to parents and potential parents, most of whom, it seems, have only the vaguest notion of how much children really cost.

6. Motivational campaigns that attempt to influence fertility rates should take account of cultural and social class differences in the per-

ceived value of children. Programs will be more effective if they are tailored to the living situations and aspirations of individuals in different ethnic and socioeconomic groups. For example, in low-income communities and Filipino neighborhoods, programs might stress the economic security provided by various government programs. The high costs of a college education could be emphasized in groups with high educational aspirations.

7. Although contraceptive knowledge and use were nearly universal among Hawaii respondents, a large proportion of women in the sample had been premaritally pregnant and many more had their first child earlier than they would have liked. Effective contraceptives are available, but young couples often use ineffective methods (or no method) even when a pregnancy is not wanted. Family planning information is distributed at the marriage license bureau in Honolulu, but it often reaches target couples too late to prevent an unwanted pregnancy. Accurate family planning information should be made more available, especially to young people, to allow them to choose freely when, and if, they will have children.

8. Legislation to insure equal rights and equal opportunities to women might lead to reduced fertility rates by weakening traditional sex role imperatives. It would provide women with more viable alternatives to raising children than are now available to them. Such legislation might also reduce the perceived importance of having children of a particular sex. Hawaii was the first state in the country to ratify the Equal Rights Amendment and, since Hawaii has a particularly large percentage of working women, the legislature tends to be strongly in favor of such measures. Equal rights legislation must nevertheless be stronger and more adequately enforced if sex discrimination is to be substantially eliminated.

9. The establishment of reasonably priced, quality child care facilities would decrease many of the costs of children. The availability of such facilities would reduce the restrictions and opportunity costs caused by children and eliminate much of the responsibility and emotional burden of parents in caring for their children. On the other hand, it would free women to pursue careers and other activities that are antinatalist in their effect. Moreover, by providing companionship for children, child care facilities would alleviate the necessity of having a large number of children of one's own. The net effect on fertility is difficult to predict. In short, satisfactory child care facilities would have many of the same implications for fertility trends as communal living arrangements. Certain residential arrangements, such as cluster

housing or condominiums with common recreation and play areas, would presumably have some of these same effects.

10. Continuity of family name emerged as an important reason for wanting sons in every group. Laws requiring a woman to adopt her husband's family name tend to perpetuate continuity of family name as an important value of children. Until recently Hawaii was the only state in the Union that denied women a choice in this matter; the law could be circumvented only by means of a lengthy appeal to the lieutenant governor. In January 1975 the law was found by a state circuit court to be unconstitutional, and in March as this report was going to press the State House of Representatives passed a bill liberalizing the earlier statute.

11. The VOC Study revealed that couples generally reject societal influences on their family-size decisions. Appeals to have smaller families for the good of society thus may not be effective unless they can be shown to apply directly to the tangible individual interests of couples. On the other hand, religious or societal pressures to have large families should not, in and of themselves, be very effective in keeping fertility rates from dropping further if there is sufficient impetus for reduced fertility. (A large proportion of Catholic women in the Hawaii sample and in the United States as a whole have used artificial means of contraception.)

12. If the length of a normal work week continues to decline, workers will have more leisure time available to them. The net effect of an increase in leisure time on the value of children is difficult to predict. On the one hand, increased leisure may increase the desire for children to create diversion and a full family life. On the other, couples would have more time for travel and other leisure-time activities, and the restrictions imposed by children might therefore become more burdensome.

Implications for future research

The first phase of the Value of Children Study was largely exploratory in its purpose. The results have served as a guide in preparing for more extensive studies in Indonesia, the Republic of Korea, the Philippines, Singapore, Taiwan, Thailand, Turkey, and the United States. It is not possible in this brief section to relate all that we have learned about the usefulness of various measures, the wording of particular questions, the adequacy of various interviewing procedures, and the problems encountered in cross-cultural research. We will concentrate instead on

several general points that should be helpful to other researchers who are attempting to understand better why people have children.

1. The value of children is clearly not unidimensional. Studies that focus on a single dimension of the value of children (for example, intensive studies of the actual costs of raising children) will provide useful pieces of information, but the greatest dividends are likely to be gained from multidisciplinary studies that attempt to examine all facets of the value of children.

2. Children mean different things to different people. They serve different functions in different cultures, ethnic groups, and SES groups. This fact makes it difficult to explore intensively motivations that are salient to only some groups by means of a research instrument that is designed primarily for comparative analysis. In the first phase of the VOC Study, the questionnaire concentrated on core questions that were asked in all countries involved in the study, and insufficient interview time was available for culture-specific questions. Although comparative data are of crucial importance in cross-cultural studies of the value of children, the amount of core material should be restricted to allow sufficient flexibility for the value of children to be placed in its proper cultural context.

3. One of the most common criticisms of demographic surveys is that too often they rely solely on female respondents. There are solid practical reasons for favoring interviews with female respondents, but the possibility of arriving at strongly biased results in this fashion would seem, on the surface, to overrule practical considerations. After all, childbearing decisions are generally made jointly by husband and wife and there is no a priori reason to believe that men and women will have identical or even similar values of children. Nevertheless, the results of the VOC Study in Hawaii and in Asia suggest that women and men share a broadly similar orientation toward children. While not too much should be made of this finding, owing to the specialized nature of the VOC samples, to the extent that the finding is generalizable it appears that demographic surveys relying solely on members of one sex may not be too inaccurate. This does not imply that men (or women) should be ignored in future demographic surveys; it is always preferable to include both. But if budgetary or other practical restrictions limit the sample, it would be sufficient to compromise by choosing a majority of respondents from one sex together with a subsample of respondents of the opposite sex.

4. In the present study, it was not possible to examine alternatives to children in a comprehensive way since there were no previous

empirical data on the positive and negative values associated with children. Now that a substantial amount of baseline data on the value of children has been collected and the salient dimensions of the value of children are being mapped out in a number of countries, it is possible, and highly desirable, for future studies to place greater emphasis on perceived alternatives to children.

5. In order to determine the extent to which people's perceptions of the satisfactions and costs of children actually influence their fertility and family planning behavior, it is necessary to measure their feelings about the value of children at the time they are making their fertility decisions. Retrospective questions about fertility decisions are not likely to be very successful. The value of children to a person at a particular time can be related to that person's family-size desires and expectations, but only through a longitudinal study is it possible to determine satisfactorily the influence of the value of children on actual fertility behavior. Of course longitudinal studies require large commitments of time and funds, but the payoff is likely to be substantial. Even if only one survey round is contemplated, it is desirable to identify the initial sample carefully enough so that additional rounds would be possible if they became feasible at a later date.

6. It is clear from our study that the precise context in which questions about the value of children are couched affects the respondent's frame of reference and the answers that he or she gives. Questions may refer to feelings about children in general or about one's own children or about one's perception of societal norms with regard to children. Open-ended questions are useful for examining values that are most salient to respondents, but the results are highly dependent on respondents' ability to verbalize their feelings and other extraneous factors. If respondents are presented with structured categories, however, the researcher may not be able to ferret out what is really on their minds. Each type of question and each context has its own strengths and weaknesses and its own purposes. But the fact that different questions yield somewhat different results cautions against reliance on one type of question or on an over-simplified set of measures. The value of children is complex, and a complex methodology is required to measure it.

appendices

Appendix A Screening questionnaire used in Value of Children Study: Hawaii

1. First of all, are there any married couples living in this (house/apartment)?
   ☐ Yes *(Talk to either spouse.)* ☐ No *(Go to end.)*

2. Is your (husband/wife) living with you now?
   ☐ Yes ☐ No *(Go to end.)*

3. How many children do you and your (husband/wife) have?
   _____ children ☐ None *(Go to end.)*

4. How old are you now? And your (husband/wife)?

HUSBAND	WIFE
☐ Under 20 *(Go to end.)*	☐ Under 20 *(Go to end.)*
☐ 20–24	☐ 20–24
☐ 25–29	☐ 25–29
☐ 30–34	☐ 30–34
☐ 35–39	☐ 35 or over *(Go to end.)*
☐ 40–44	
☐ 45 or over *(Go to end.)*	

5. *(Give card to respondent.)* People in Hawaii come from many different backgrounds. From this list of ethnic groups, which one would you say describes you best? And your (husband/wife)?

	HUSBAND	WIFE
Caucasian, white	☐ _____ %	☐ _____ %
Japanese	☐ _____ %	☐ _____ %
Filipino	☐ _____ %	☐ _____ %
Chinese	☐ _____ %	☐ _____ %
Hawaiian	☐ _____ %	☐ _____ %
Korean	☐ _____ %	☐ _____ %
Negro, black	☐ _____ %	☐ _____ %
Samoan	☐ _____ %	☐ _____ %
_____	☐ _____ %	☐ _____ %
_____	☐ _____ %	☐ _____ %

(If "mixed" or more than one ethnic group given, ask): About what percent of each ethnic group are you/is your (husband/wife)?

(If neither husband nor wife has any Caucasian or Japanese or Filipino background, go to end.)

6. What is your usual occupation? Your (husband's/wife's) usual occupation?

HUSBAND	WIFE
Occupation: _____	Occupation: _____
Describe work: _____	Describe work: _____

7. What is the highest grade of school you completed? And your (husband/wife)?

   Husband_____ Wife _____

8. Family name _____

   Street address _____

   Zip code _____

That's all the information we need. Thank you very much for your help.
(End.)

Appendix B Country-specific questions in Hawaii Value of Children questionnaire*

Background

108.1 *(Give ethnic group card to respondent.)* People in Hawaii come from many different backgrounds. From this list of ethnic groups, which one would you say describes you best?

☐ Caucasian, white	____ %	☐ Korean	____ %
☐ Japanese	____ %	☐ Negro, black	____ %
☐ Filipino	____ %	☐ Samoan	____ %
☐ Chinese	____ %	☐ _____	____ %
☐ Hawaiian	____ %	☐ _____	____ %

108.2 *(If "mixed" or more than one ethnic group given, ask):* About what percent of each ethnic group are you?

Family decision-making

119 Here is a list of some things that families often have to make decisions about. In your family, who usually has more influence, the husband or wife, in making decisions about the following things: . . .

	Husband	Wife	Both equally	Don't know
(5) Whether or not the wife should have a job outside the home.				

General opinions

128.1 Which of these two statements do you agree with more?

1 ☐ A couple should have as many children as they really want, even if it is a financial strain for the family.

2 ☐ A couple should first think about the expenses involved in having children, then decide how many children they want.

Comment *(record as given):* _____

_____

128.2 Which of these two statements do you agree with more?

1 ☐ When deciding about having a child, a couple should compare the

* For the core questionnaire used in all six countries, see Arnold et al. (1975). The questions, or parts of questions, in this appendix were added to the core questionnaire for use in Hawaii.

pleasures they will get from a child with the pleasures they might get from other things, such as more recreation or travel.

2 ☐ When deciding about having a child, a couple should realize that the pleasures they will get from a child are so unique and special that they cannot be compared with any other pleasures in life.

Comment *(record as given):* _____

_____

128.3 Here are four things that most people want. Which one is most important to you, and which is second most important? *(Read choices and enter 1 and 2 in rank column.)*

	Rank 1 and 2	Least important
(1) To have a job or some other activity away from home that you enjoy.	_____	_____
(2) To have a happy family.	_____	_____
(3) To have lots of money.	_____	_____
(4) To have the respect of other people in the community.	_____	_____

128.4 Of the two items you did not choose *(read items)*, which would you say is *least* important to you? *(Check item in last column.)*

128.5 Some people feel that there is nothing in life more important to them than their children.

Other people feel that their marriage relationship, or religion, or job, or something else is equally important or more important than children.

What things in your life are equally important to you, or more important, than children?

	Equally	More
(1) _____	☐	☐
(2) _____	☐	☐
(3) _____	☐	☐
(4) _____	☐	☐

(For each one, ask): Would you say that it is equally important to you, or more important, than children?

Religion

129.1 How important is your religion in your own life? Would you say your religion is *(read choices):*

1 ☐ Very important
2 ☐ Somewhat important
3 ☐ Not important at all

129.2 How would you feel if your children did not have any religious beliefs when they grew up? Would you be *(read choices):*

1 ☐ Very disappointed
2 ☐ Somewhat disappointed
3 ☐ Not disappointed at all

Occupation (for husbands only)

(134.1–134.3 ask only of farm workers.)

134.1 What crops are grown on the farm land you work on?

134.2 Do you grow any of your own food? ☐ Yes ☐ No

(If yes):

134.3 About how much would this food be worth in a month if you had to buy it at the market?

_____ amount per month

135.1 If women do the same work as men, do you think they should receive the same pay as men *(read choices):*

☐ Always ☐ In most cases ☐ In only a few cases

135.2 Aside from keeping house, is your wife working now?

☐ Yes →

135.3 How do you feel about your wife working? Do you like the idea of her working, do you have some objections to it or does it make no difference to you?

1 ☐ Like
2 ☐ Some objections
3 ☐ No difference

135.4 The number of children a couple wants is sometimes affected by whether or not the wife works. If your wife stopped working, do you think you would want more, fewer or the same number of children you want right now?

1 ☐ More 3 ☐ Same
2 ☐ Fewer 4 ☐ Depends (On what? _____ _____)

☐ No → 135.5 If your wife did go to work, would you like the idea of her working, would you have some objections to it, or would it make no difference to you?

1 ☐ Like
2 ☐ Some objections
3 ☐ No difference

Occupation (for wives currently working)

139.1 When you are at work who usually takes care of your children?

139.2 Women may work for a number of different reasons. I am going to read a list of reasons why some women work. For each one, please tell me whether or not it is an important reason why you are now working.

	Important 1	Not Important 2
(1) My family really needs the money.	☐	☐
(2) I want to earn money to buy extra things for myself or my family.	☐	☐
(3) I don't like to stay around the house all the time.	☐	☐
(4) I like the challenge of working.	☐	☐
(5) I believe that women ought to work, the same as men do.	☐	☐
(6) I don't want to waste my education.	☐	☐
(7) I want to save money for the future needs of my family.	☐	☐
(8) Working gives me a sense of fulfillment.	☐	☐
(9) I enjoy the social contacts work provides.	☐	☐
(10) I want to be useful to society.	☐	☐

139.3 Can you think of any other important reasons why you are now working?

139.4 What is the single most important reason that you are working?

139.5 We would like to know how satisfied you are with your current job. In general, would you say that you are *(read choices):*

1 ☐ Very satisfied with your job
2 ☐ Fairly satisfied
3 ☐ Somewhat dissatisfied
4 ☐ Very dissatisfied

139.6 How do you think your husband feels about your working? Do you think he likes the idea of your working, does he have some objections to it, or does it make no difference to him?

1 ☐ Likes 2 ☐ Some objections 3 ☐ No difference

139.7 The number of children a couple wants is sometimes affected by whether or not the wife works. If you stopped working, do you think you would want more, fewer, or the same number of children you want right now?

1 ☐ More 3 ☐ Same

2 ☐ Fewer 4 ☐ Depends (On what does it depend?)

140.1 What is the main kind of work you have done?

140.2 Did you work at all between _____?
(Ask for each interval up to last child; record all answers in table.)

(For each interval in which respondent worked, also ask the following questions):

How many months did you work during that time?

For most of this work were you able to care for your (child/children) while you were at work or did you have to make other arrangements?

Interval	W = Worked NW = Did not work	Number of months worked	M = Mother takes care O = Other arrangements
the time you first got married and the birth of your first child			
the birth of your first child and your second child			
the birth of your second child and your third child			
the birth of your third child and your fourth child			
the birth of your fourth child and your fifth child			
the birth of your fifth child and your sixth child			

140.3 How many months have you worked since the birth of your last child?

_____ months

Occupation (for wives not currently working)

141.1 There may be a number of different reasons why women do not work outside of the home. I am going to read you a list of reasons why some women choose not to work. For each one, please tell me whether or not it is an important reason why you are not now working.

	Important 1	Not important 2
(1) I have to take care of my (child/children).	☐	☐
(2) There aren't any good jobs available.	☐	☐
(3) A woman's place is in the home.	☐	☐
(4) I don't have the right skills for the type of job I'd like.	☐	☐
(5) I like staying at home.	☐	☐
(6) Our family doesn't need the money.	☐	☐
(7) I don't have any means of transportation to work.	☐	☐
(8) I don't have enough time to take a job.	☐	☐

141.2 Can you think of any other important reasons why you are not working now?

141.3 What is the single most important reason why you are not working?

141.4 If you did go to work, do you think that your husband would like the idea of your working, would he have some objections to it, or would it make no difference to him?

1 ☐ Like 2 ☐ Some objections 3 ☐ No difference

141.5 If you had to go to work, would anyone be able to take care of your children while you were working?

1 ☐ Yes 2 ☐ No

(If yes):

141.6 Who would that be?

144.1 Did you work at all between _____?
(Ask for each interval up to last child; record all answers in table.)

(For each interval in which respondent worked, also ask the following questions):

How many months did you work during that time?

For most of this work were you able to care for your children while you were at work or did you have to make other arrangements?

Interval	W = Worked NW = Did not work	Number of months worked	M = Mother takes care O = Other arrangements
the time you first got married and the birth of your first child			
the birth of your first child and your second child			
the birth of your second child and your third child			
the birth of your third child and your fourth child			
the birth of your fourth child and your fifth child			
the birth of your fifth child and your sixth child			

144.2 Have you worked at all since the birth of your last child?

1 ☐ Yes 2 ☐ No

(If yes):

144.3 How many months have you worked since the birth of your last child?

_____ months

144.4 For most of this work, were you able to care for your (child/children) while you were at work or did you have to make some other arrangements?

1 ☐ Care for children while working 2 ☐ Other arrangements

Occupation (for all women)

148.1 If women do the same work as men, do you think they should receive the same pay as men *(read choices)*:

1 ☐ Always 2 ☐ In most cases 3 ☐ In only a few cases

149.1 Did your mother ever have a job during the time you were growing up?

1 ☐ Yes 2 ☐ No

(if yes):

149.2 What was the main kind of work that she did?

154.1 Do you or your husband have any children from a previous marriage, either living with you or living somewhere else?

1 ☐ Yes 2 ☐ No

(If yes, ask name, sex, whether child of husband or wife, whether living here or somewhere else.)

Name	Sex B = Boy G = Girl	Child of:		Lives:	
		Husband	Wife	Here	Elsewhere
(1)					
(2)					
(3)					
(4)					

Appendix C Attitude items included in nine subscales, Value of Children Study

Item no.	*Subscale*
	Continuity, tradition, security
2	A good reason for having children is that they can help when parents are too old to work.
7	It is important to have children so that the family traditions will live on.
25	One of the best things about having children is the true loyalty they show to their parents.
34	A man has a duty to have children to continue the family name.
35	A person can feel that part of him lives on after death if he has children.
	Parenthood satisfactions
29	Just the feeling a parent gets of being needed is enough to make having children worthwhile.
30	A person who has been a good parent can feel completely satisfied with his achievements in life.
33	One of the best things about being a parent is the chance to teach children what they should do and what they should not do.
	Role motivations
8	It is only natural that a man should want children.
16	A girl becomes a woman only after she is a mother.
22	After becoming a parent, a person is less likely to behave immorally.
28	It is only natural that a woman should want children.
45	A boy becomes a man only after he is a father.
	Happiness, affection
4	It is only with a child that a person can feel completely free to express his love and affection.
43	The family with children is the only place in the modern world where a person can feel comfortable and happy.
44	A person who has no children can never really be happy.

Item no.	*Subscale*
	Goals, incentives from children
6	Having children gives a person a special incentive to succeed in life.
14	Having children makes a stronger bond between husband and wife.
15	One of the highest purposes of life is to have children.
	Social status from children
21	A young couple is not fully accepted in the community until they have children.
27	A person with children is looked up to in the community more than a person without children.
	External controls on childbearing
11	Considering the pressures from family and friends, a person really doesn't have much choice about whether or not to have children.
38	It isn't right for a couple to interfere with nature by deciding to limit the number of children they will have.
	Costs of children
19	Children limit you in what you want to do and where you want to go.
26	Having children causes many disagreements and problems between husband and wife.
37	Raising children is a heavy financial burden for most people.
39	When you have children, you have to give up a lot of other things that you enjoy.
	Decision-mindedness in childbearing
9	A couple ought to think seriously about the inconveniences caused by children before they have any.
23	The first thing a couple should think about when deciding to have children is whether or not they can afford it.
32	Before having a child, a couple should consider whether they would rather use their money for something else.
41	Before having a child, a couple should consider whether it would interfere with the wife's work or not.

references

Arnold, Fred, et al.

1975 *Introduction and Comparative Analysis.* Vol. 1, The Value of Children: A Cross-National Study. Honolulu: East-West Population Institute.

Babbie, Earl R.

1972 *The Maximillion Report.* Honolulu: Citizens for Hawaii.

Berelson, Bernard

n.d. The value of children: a taxonomical essay. In *The Population Council Annual Report 1972,* pp. 17–27. New York: Population Council.

Blake, Judith

1968 Are babies consumer durables? *Population Studies* 22(1):5–25.

1974 Can we believe recent data on birth expectations in the United States? *Demography* 11(1):25–44.

Bogue, Donald J.

1969 *Principles of Demography.* New York: John Wiley.

Bulatao, Rodolfo A.

1975 *Philippines.* Vol. 2, The Value of Children: A Cross-National Study. Honolulu: East-West Population Institute.

Cain, Glen G., and Adriana Weininger

1973 Economic determinants of fertility: results from cross-sectional aggregate data. *Demography* 10(2):205–223.

Commission on Population Growth and the American Future

1972 *Population and the American Future.* Washington, D.C.: U.S. Government Printing Office.

Duesenberry, James S., and Bernard Okun

1960 Comment. In Universities–National Bureau Committee for Economic Research, *Demographic and Economic Change in Developed Countries.* Special Conference Series, pp. 231–240. Princeton: Princeton University Press.

Fisher, Tadd

1973 Hawaii: growing pains in paradise. *Population Bulletin* 29(3).

Freedman, Deborah; Ronald Freedman; and Pascal K. Whelpton

1960 Size of family and preference for children of each sex. *American Journal of Sociology* 66:141–146.

Gardner, Robert W., and Eleanor C. Nordyke

1974 *The Demographic Situation in Hawaii.* Papers of the East-West Population Institute, no. 31. Honolulu.

Guvin, G.; J. Veroff; and S. Feld

1960 *Americans View Their Mental Health: A Nationwide Interview Survey.* Joint Commission on Mental Illness and Health, Monograph Series, no. 4. New York: Basic Books.

Hoffman, Lois Wladis, and Martin L. Hoffman

1973 The value of children to parents. In James T. Fawcett, ed., *Psychological Perspectives on Population,* pp. 19–76. New York: Basic Books.

Hood, David R., and Bella Z. Bell

1973 *In-migration as a Component of Hawaii Population Growth: Its Legal Implications.* Report no. 2. Honolulu: Legislative Reference Bureau.

Iritani, Toshio

1975 *Japan.* Vol. 6, The Value of Children: A Cross-National Study. Honolulu: East-West Population Institute (forthcoming).

Leibenstein, Harvey

1957 *Economic Backwardness and Economic Growth.* New York: John Wiley.

Mincer, Jacob

1963 Market prices, opportunity costs, and income effects. In C.J. Christ et al., eds., *Measurement in Economics: Studies in Mathematical Economics and Econometrics.* Stanford: Stanford University Press.

Mueller, Eva

1972 Economic motives for family limitation: A study conducted in Taiwan. *Population Studies* 27(3):383–403.

Namboodiri, N. Krishnan

1972 Some observations on the economic framework for fertility analysis. *Population Studies* 26(2):185–206.

Nie, Norman H.; Dale H. Bent; and C. Hadlai Hull

1970 *SPSS: Statistical Package for the Social Sciences.* New York: McGraw-Hill.

Nordyke, Eleanor C.

1973 In-migration versus fertility as factors in Hawaii's population growth. *Hawaii Medical Journal* 32(4):1–6.

Norris, Peter S.

1975 Wife–husband fertility issues in Hawaii: A social-psychological analysis. Ph.D. dissertation, Department of Psychology, University of Hawaii (forthcoming).

Poffenberger, Thomas, and Shirley B. Poffenberger

1973 The social psychology of fertility behavior in a village in India. In James T. Fawcett, ed., *Psychological Aspects of Population.* New York: Basic Books.

Rainwater, Lee

1965 *Family Design: Marital Sexuality, Family Size, and Contraception.* Chicago: Aldine.

Robinson, Warren E., and David L Horlacher

1971 *Population Growth and Economic Welfare.* Reports on Population/Family Planning, no. 6. New York: Population Council.

Rosario, Florangel Z.

n.d. Exploratory observations on family interaction patterns and family planning in the Filipino community of Waialua, Oahu. Honolulu: East-West Population Institute.

Smith, D.H., and A. Inkeles

1966 The OM Scale: a comparative socio-psychological measure of individual modernity. *Sociometry* 29:353–377.

United States Bureau of the Census

1971a *Census of Housing: 1970, Block Statistics, Final Report HC(3)-62, Honolulu, Hawaii, Urbanized Area.* Washington, D.C.: U.S. Government Printing Office.

1971b *Census of Population: 1970, General Social and Economic Characteristics, Final Report PC(1)-C13, Hawaii.* Washington, D.C.: U.S. Government Printing Office.

197 *Current Population Reports, Series P-20, no. 211, Previous and Prospective Fertility: 1967.* Washington, D.C.: U.S. Government Printing Office.

1972 *Census of Population and Housing: 1970, Census Tracts, Final Report PHC(1)-88, Honolulu, Hawaii, SMSA.* Washington, D.C.: U.S. Government Printing Office.